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ABSTRACT

This document reports on the partnership between Prince George's County (Maryland) Public Schools and the Prince George's Private Industry Council to provide workplace literacy classes at worksites for employees of 10 different employers. Workplace-specific, work-related curricula have been developed in either English for speakers of other languages or in basic reading and mathematics job skills for each site. The 12-page report is followed by curriculum samples organized by the 10 employers: Prince George's County Maintenance Yard at Brown Station Road, Cintas Corporation, Grace Culinary Systems, Laurel Race Course, Litton-Amecom, Loral-Computer Sciences Corporation, New Carrollton Public Works, Prince George's Hospital Center, and Sovran Bank. An introductory sheet for each employer follows this format: site, instructor(s), time (whether volunteer or work release, dates, days, and class times), student description, and instructor summary. Sample curriculum materials for specified Comprehensive Adult Student Assessment System (CASAS) objectives follow. The CASAS objective may be narrowed by a site-specific objective. For each objective are provided these types of curriculum materials: paper-and-pencil exercises, diagrams, review sheets, informational sheets, questions, or tests. Three outside evaluation reports are appended. The first analyzes learners' responses related to reasons for enrollment and helpfulness of class. The second describes and evaluates the program materials in use and workplace-relatedness of curriculum. The third focuses on curriculum development and program administration. (YLB)

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ED353389

Curriculum Samples for 1992

National Workplace Literacy Program

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
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Prince George's County Public Schools
Prince George's County Private Industry Council
Maryland
1992

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ABSTRACT

1. **Program Title:** National Workplace Literacy Program, (CFDA 84.198A)

2. **Project Title:** National Workplace Literacy Program

3. **Award No.:** V 198A10013

4. **Project Director:** Eleanor Rotter

Awardee: Prince George's County Public Schools

Address: 14201 School Lane
Upper Marlboro, Maryland 20772

Telephone: (301) 386-1512

5. **Funds by Fiscal Year:**

Federal FY 91	$101,080
Recipient (non-Fed)	67,530
Total	$168,610

Federal Funds = 60% of Total

6. **Award Period:** March 1, 1991 - August 31, 1992

7. **Federal Project Officer:**

Education Program Staff
Sarah Newcomb (202) 732-2390

Education Grants Staff
Linda Kinney (202) 708-8563

8. **Objectives:**

   1. To educate 250+ employees in Prince George's County in either English Communication Skills for Speakers of Other Languages (ESOL) or in basic reading and math job skills.

   2. To develop a curriculum using work-related materials.

9. **Procedures:**

   1. Employees will be recruited to attend either ESOL classes or basic skill classes at the job site. Classes will be held for two hours twice a week for ten weeks. A counselor will be used to acquaint students with options available to pursue further training and education.

   2. Using materials collected at the worksite and skills utilized in completing job tasks, a curriculum will be developed for each worksite.

10. **Outcomes /Results/Products**

    1. A better trained employee

    2. A sample curriculum for each worksite location

11. **Educational Level(s):**

    All levels of ESOL and all levels of basic skills (0 - 12). A minimum of 40 hours of classroom instruction will be offered to all students.

12. **Target Population:**

    Any employer in Prince George's County with a large number of disadvantaged or limited English proficiency employees.

13. **Estimated Number of Trainees:**

    250+

14. **Partner:**

    Prince George's County Private Industry Council

A. PROGRAM DEFINITION

The Prince George's County Public Schools and the Prince George's Private Industry Council have worked together since March of 1991 to provide workplace literacy classes at worksites for individuals in the County who are employed by ten different employers. These employers have recognized the problems of workers with poor literacy and deficient basic skills, and have chosen to attack the problem by providing educational opportunities at their worksites. Over five hundred employees participated in the various types of classes supported with federal funds. See table of worksites and list of key events.

TABLE OF WORKSITES

SITE	CONTACT PERSON	CLASSES	TOTAL HOURS OF INSTRUCTION	TOTAL # OF STUDENTS	TYPE OF INSTRUCTION	UNDUPLICATED COUNT OF STUDENTS
1. American Pest Management 6460 New Hampshire Ave. Takoma Park, MD. 20912	Mr. Wayne White Director, Human Resources 301-891-2600	3	120	29	Basic Skills low 13 high 16	15
2. Cintas Uniform Cleaning Co. 1769 Brightseat Rd. Landover, MD. 20785	Ms. Ann Wilcox Director of Human Resources 301-322-2255	1	40	21	ESL low level	21
3. Grace Culinary Arts 8003 Laurel Lakes Court Laurel, MD. 20707	Mrs. Patricia Watkins Office Manager 301-497-6919	5	128	72	ESL low 63 high 9	72
4. Laurel Race Track Rt. #198 Laurel, MD. 20707	Mr. Wayne Wright Executive Director-MTHA 6314 Windsor Mill Rd.	9	360	102	Basic skills low 2 high 13 ESL low 37 high 50	98
5. Litton Systems Division, Amecom 5115 Calvert Rd. College Park, MD. 20740	Mr. Tim Edwards Division Director of Employee Relations 301-454-9523	1	40	8	ESL high level	8
6. Loral Aerosystems Computer Sciences Corp. 4600 Powder Mill Rd. Beltsville, MD. 20705	Ms. Nancy Coffey Supervisor, Salaried Personnel 301-805-0549	1	40	15	ESL high level	15
7. New Carrollton Public Works 6016 Princess Garden Pkwy New Carrollton, MD. 20784	Mr. Richard Robbins Director of Public Works 301-577-1008	5	200	46	Basic Skills low 4 med 16 high 25	29

TABLE OF WORKSITES

8.	P.G. County Public Schools Facilities Dept. at Brown Station Rd Upper Marlboro, MD. 20772	Mr. Robert Kuntz Director of Operations Facilities Dept. 301-952-6610	14	560	150	Basic skills low 40 med 46 high 168	67
9.	Prince George's Hospital Ctr. 3001 Hospital Drive Cheverly, MD. 20785	Ms. Helen Segatto Education Specialist 301-618-6495	1	40	13	Basic skills low 5 med 8	13
10.	Sovran Bank 6401 New Hampshire Ave. Takoma Park, MD . 20912	Ms. Rosalie Evans Operations Officer 301-270-7165	3	111	45	ESL low 8 med 24 high 10	30
			43	1639	501		368

KEY EVENTS

3/1/91	Grant awarded
4/20/91	Initial staff development meeting
4/25/91	Classes 1,2,3 New Carrollton Department of Public Works
4/29/91	Classes 4,5,6,7 Prince George's County Public Schools Maintenance Yard
5/15/91	Classes 8,9,10 Laurel Race Track
5/29/91	Class 11 Litton Systems
6/1/91	Classes 12,13 Sovran Bank of Maryland
6/19/91	Classes 14,15 New Carrollton Department of Public Works
7/10/91	Classes 16,17,18,19 Prince George's County Board of Education Maintenance Yard
8/2/91	Staff Development meeting
9/4/91	Class 20 Sovran Bank of Maryland
9/16/91	Prince George's County Private Industry Council hosts "Round Table" meeting to introduce program to Chambers of Commerce
9/26/91	Class 21 Loral Aerosystems
9/30/91	Classes 22,23,24,25,26 Grace Culinary Systems
10/7/91	Classes 27,28,29 Prince George's County Board of Education Maintenance Yard
10/25/91	Presentation before Maryland State Department Of Education
11/4/91	Classes 30,31,32 Laurel Race Track
11/11/91	Class 33 Cintas
12/4/91	Class 34 Prince George's Hospital

1/7/92	Classes 35,36 American Pest Management
3/26/92	Class 37,38 Prince George's County Public Schools Maintenance Yard Classes 39,40 Laurel Race Track Class 41 American Pest Management Class 42 Prince George's County Board of Education MaintenanceYard
4/8/92	Class 43 Laurel Race Track
4/9/92-4/10/92	Staff attends Maryland Association of Adult, Community and Continuing Education conference
4/13/92	Curriculum meeting for staff
6/19/92	Reception for employers, staff, and support personnel involved in program
9/9-11/92	National Workplace Literacy Project Directors' Closeout Conference

B. OBJECTIVES OF THE PROJECT

Literacy and related job skills have been enhanced through the partnership of the Prince George's County Public Schools (PGCPS) and the Prince George's Private Industry Council (PIC). The School System's Adult Basic Education (ABE) personnel worked cooperatively with the PIC to identify businesses in need of literacy and basic skills services. Identified employers assigned a representative to cooperate with the workplace literacy facilitator to focus on the needs of participants at each worksite. (See table of worksites for contact person)

C. GENERAL OPERATIONS

At the onset, the contact person, facilitator and teacher toured the organization, noted skills required to complete job tasks and gathered materials from the site that were part of the day to day job.

After the students were recruited by a meeting, bulletin, supervisor, or friend, a time and place were set for the project facilitator and the students to meet for pre-testing and discussion of student objectives. A teacher was always present to meet the students and to offer encouragement.

The pre-testing was the determining factor in the selection of materials and the need to group the classes into different levels. Other factors important in these grouping decisions were the number of students interested in the class, the hours that facilities for classes would be available, and whether the classes would be held before, during, or after work hours.

The teacher, the facilitator, the worksite representative and the students discussed employee-specific skills that the students should learn by the end of a class session. Each employer was given a CASAS Workplace Literacy Draft to indicate items to be taught. Many employers did not care to be worksite-specific with the materials. Some stressed that it was more than sufficient for the student to learn how to learn, and especially to learn how to read and to communicate orally and in writing. The teachers and the project facilitator made every effort to seek out worksite-specific materials. Each site compiled a binder of materials used. The job task and CASAS objective was noted for each entry. (See samples for each workplace site)

In order to prepare for teaching skills which would enhance work skills, the teachers shadowed some employees on the job. The classes were frequently composed of people with different responsibilities, and the teacher also relied upon obtaining a general idea of the purpose of the organization and trying to understand each individual's work.

The teachers had constant access to the materials used by the Prince George's County Adult Basic Education Program, and they used any materials they felt would be appropriate for any individual. In addition, not all worksites provided copier access, so the teachers duplicated job-specific materials at Bladensburg Instructional Services Center.

The classes initially ran for forty hours. Class attendance records were maintained by each teacher. During each forty hour session the class was frequently visited by the project facilitator who would help and encourage employees, advise the teacher on other materials and strategies which might be used, and monitor the attendance of the students. The project facilitator would communicate with the worksite representative and discuss the progress of the students, or any logistical problems which might be occurring. Many teachers also had contact with the worksite representatives and problems with scheduling were often solved by the teacher or by members of the classes.

The counselors visited each worksite regularly, first making a presentation of the resources available to each student, and then providing each student with a referral card. Counselors also spoke to all appropriate classes about applying for the GED exam and the scoring of that exam.

At the end of the first forty hours of class, a decision was made as to whether the classes at each worksite would continue with a second forty hour class. The decision was made with the consideration of many factors. Some classes were not continued because the students had reached the goals they had desired or because they did not maintain adequate attendance to make the class effective. The reasons are further discussed in the individual summaries. Most classes were full, enthusiastic and ready to continue learning. The students were re-registered, and new students invited to join. These classes continued to be monitored by the project facilitator and each developed a special character and identity based upon the needs of the students.

All basic skills classes were again CASAS tested to determine competencies acquired. Each ESL class was pre and post tested either by a Maryland State approved test or by a test uniquely designed for the site.

Upon completion of each class, the teachers and the counselor discussed locations of nearby Adult Basic Education programs or the prospects of the employer continuing the classes at employer expense. As of this printing both Prince George's County Board of Education Maintenance Yard and Laurel Race Course have contracted for classes.

At the end of each forty hour session, the students were surveyed. The results of these surveys helped to improve on-going classes. In addition to this in-class survey, teachers were asked to call students several weeks after the last class. The teachers used this opportunity to check on the accomplishments of students and to encourage students to seek additional educational experience.

The program was also continuously evaluated by an outside evaluator.

D. PERSONNEL

The fourteen teachers, the project director, the project counselor and the project facilitator have worked for many years in the Adult Basic Education Program of Prince George's County Public Schools. The program has provided many training sessions for its personnel. In addition to on-going contact with other personnel in the Adult Education program (many currently teach together at different ABE locations), the staff had team meetings with other teachers at the same worksite, with other teachers of classes at the same level, with the counselor, with the Adult EducationSupervisor, with the ABE Resource Teacher, and with the ABE Resource Assistant. These meetings offered the opportunity to discuss job-specific materials, published materials, and teaching strategies. None of the teachers was isolated at the worksite, as there were frequent visits by the facilitator, the counselors and frequent opportunities for teacher meetings. These meetings were held at the worksite or at the Bladensburg Instructional Center. All personnel were invited to attend the MAACCE conference in Annapolis, Maryland. Workplace literacy was the focus of the conference.

American Pest Management

Site: Cafeteria and openloading area of American Pest Management's, New Hamsphire Avenue Branch Office, Takoma Park, MD.

Instructors: Betty Sonneveldt
Mary Ellen Butlak

Time: Volunteer
Class 1 & 2 - January 7, 1992 - March 24, 1992
Class 3 - March 26, 1992 - April 28, 1992
Tuesday and Thursday
4:30 - 6:30 PM

Student: Male employees whose primary task is the chemical extermination of insects.

Instructor Summary:

American Pest Management is a small pest control firm in Prince George's County. It employs approximately forty people, thirty of whom are pest control technicians. Most technicians have a monthly route but still need to interpret a work order, read a map, locate a site, administer pesticides and write a follow-up recommendation. In order to determine the amount, concentration and spraying time of an pesticide, it is imperative that they can calculate area and volume and use proportion. Two of the technicians treat homes for termite infestation and need to be able to interpret floorplans and blueprints.

It became evident that help was needed when most of the technicians did poorly on the math test for Pest Control Technicians that was administered by American Pest Management. Concern was further heightened when it was rumored that all technicians would need to be certified by passing an exam in the near future.

Classes were held from 4:30 to 6:30 P.M. after work. No work release time was given. Refreshments were provided by the management. One group met in the "cafeteria" while the other group met in an open area where the daily work orders were delivered.

The CASAS Placement and Pre-tests were administered and the general scores were low. We were able to form two groups; one with a skill level at 0-4 grade level and the other with a skill level of grade 4 and up.

One teacher taught Language Arts while the other teacher taught Math. This was ideal and helped eliminate the "low group" - "high group" stigma. After fifty minutes the groups switched rooms and teachers.

The "lower level" group progressed through basic addition, subtraction, multiplication and division of whole numbers. Emphasis was put on interpreting maps, graphs and charts, and determining perimeter, area and volume.

The "upper level" group progressed through decimals, fractions, and percents. Emphasis was also put on interpreting maps, graphs and charts, ratio and proportion and determining perimeter, area, and volume of polygons.

In Language Arts the "lower level" group concentrated on reading, writing and spelling skills using work-orders, blue prints, and wall charts with the end goal of producing better written work reports. Improvement was noted by the employer when work orders were received.

The "upper level" group concentrated on improving reading comprehension and writing skills using the Preparing For Applicator Certification: Volume 1 as curriculum.

Because of students' staggered entrance times, there was a great need for the students to be flexible and to work as independently as possible.

Classes ran for fifteen weeks giving each student sixty instructional hours. Classes were ended at the end of April because employees were into their "busy season." It was an extremely successful experience. On the last day a "graduation" party was held with certificates, Pomp and Circumstance," refreshments and presents. Many students expressed an interest in continuing in the fall.

CASAS Objective 6.1 - Compute using whole numbers

Objective: To solve pest control problems using basic math

1. You have been baiting rats with small bait blocks placed inside bait stations. The label says that each bait block weighs 20 grams. Last week you placed 16 of the bait blocks in each of 3 new bait stations. This week, the bait stations contained the following:

   Station 1: 2 bait blocks
   Station 2: 5 bait blocks
   Station 3: 16 bait blocks

   What was the total weight (in grams) of rodenticide taken by the rats in each of the stations?

   Station 1:
   Station 2:
   Station 3:

2. Your vehicle used 15 gallons of gas and traveled 345 miles. What is its gas mileage in miles per gallon?

3. You were using sticky traps to monitor cockroaches. Five (5) sticky traps in a kitchen captured the following numbers of cockroaches:

   Trap 1: 3 Trap 2: 17
   Trap 3: 11 Trap 4: 0
   Trap 5: 9

   What was the average number of cockroaches per sticky trap that you captured in this kitchen?

4. The LD_{50} (mg/kg) of *Pesticide X* is 450, while the LD_{50} of *Pesticide* Z is 50. How many times more toxic is *Pesticide* Z than *Pesticide X*? (The lower the LD_{50} number, the more toxic a chemical is.)

CASAS Objective 6.5.2 - Recognize or evaluate simple geometric formulas
CASAS Objective 6.6.3 - Measure area and volume of geometric shapes

Objective: To solve pest control problems that require the use of area.

1. A termiticide label tells you to create a horizontal barrier by applying 1 gallon of dilution per 10 square feet. Which of the following equals 10 square feet?

   a) 2 feet by 3 feet
   b) 2 feet by 5 feet
   c) 5 feet by 5 feet
   d) 10 feet by 10 feet

2. You are using a pressurized aerosol insecticide to treat for fleas. The label says that 100 square feet of area can be treated in 10 seconds. How many seconds will it take to treat the wall-to-wall carpeting of an empty room that measures 20 feet by 15 feet?

3. Using the same product, how many seconds to treat a smaller room 12 feet by 15 feet?

4. 10 feet x 15 feet.

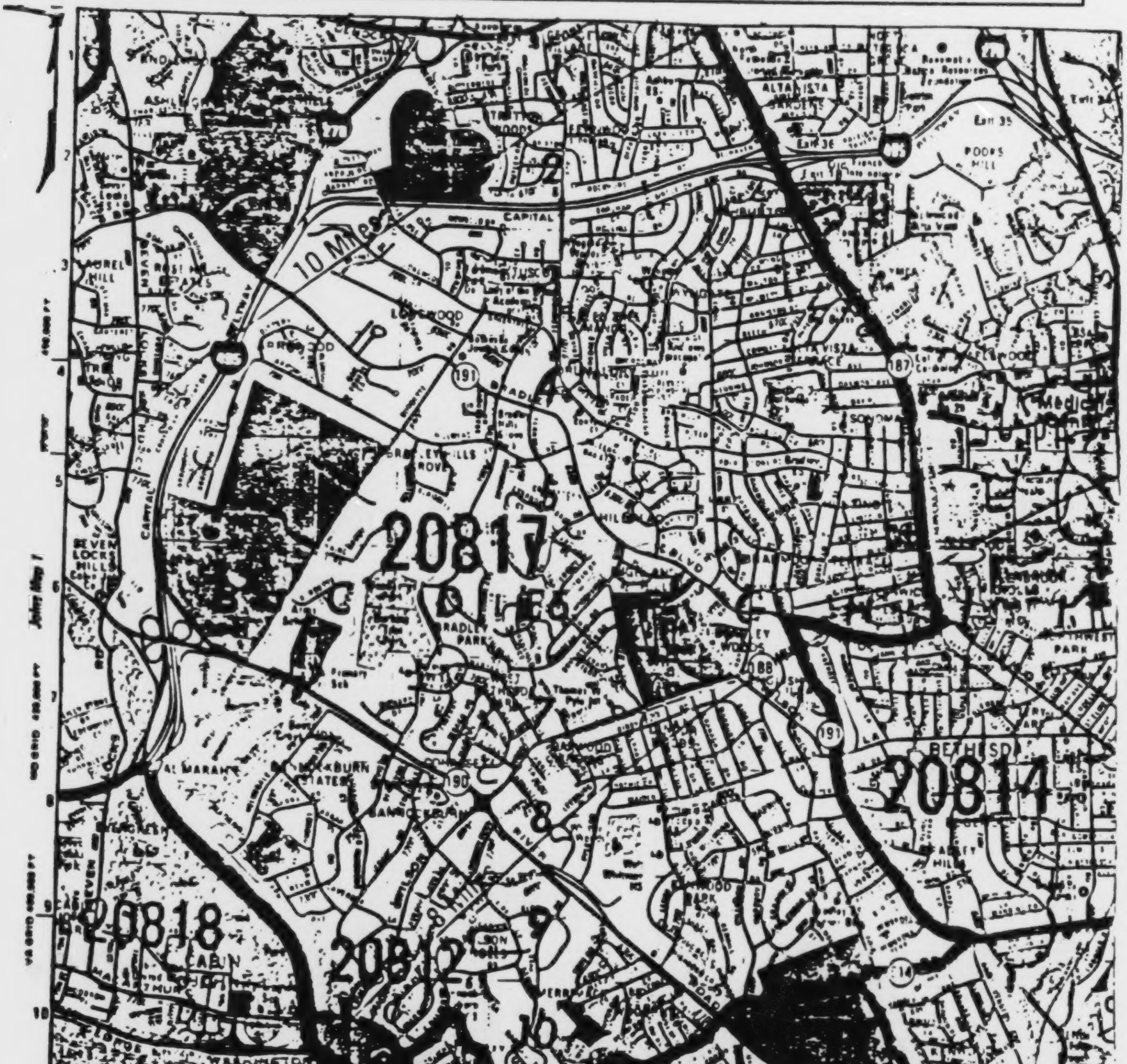
Objective: To solve pest control problems that require the use of volume.

1. A pressurized insect fogger tells you to apply at a rate of 3 seconds per 1,000 cubic feet for fly control. How many seconds should you apply this product to treat a dining room 40 feet long by 25 feet wide with an 8 foot high ceiling?

2. To control cockroaches, the same fogger calls for a treatment rate of 20 seconds per 1,000 cubic feet. How long should you apply this product if you are treating the same dining room, but this time for cockroaches?

3. How long should you apply this same fogger for controlling cockroaches in a room that is 25 feet long by 20 feet wide with an 8 foot ceiling?

CASAS Objective 1.1.3 - Interpret maps and graphs
CASAS Objective 1.9.4 - Interpret maps
CASAS Objective 2.2.1 - Ask for, give, follow, or clarify directions
CASAS Objective 2.2.5 - Use maps relating to travel needs



10 Miles
CAPITAL
191
187
188
190
20817
20814
20818
20812
20816
BETHESDA
POTOMAC ISLAND
ALTA VISTA

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CASAS Objective 1.1.3 - Interpret maps and graphs
CASAS Objective 1.9.4 - Interpret maps
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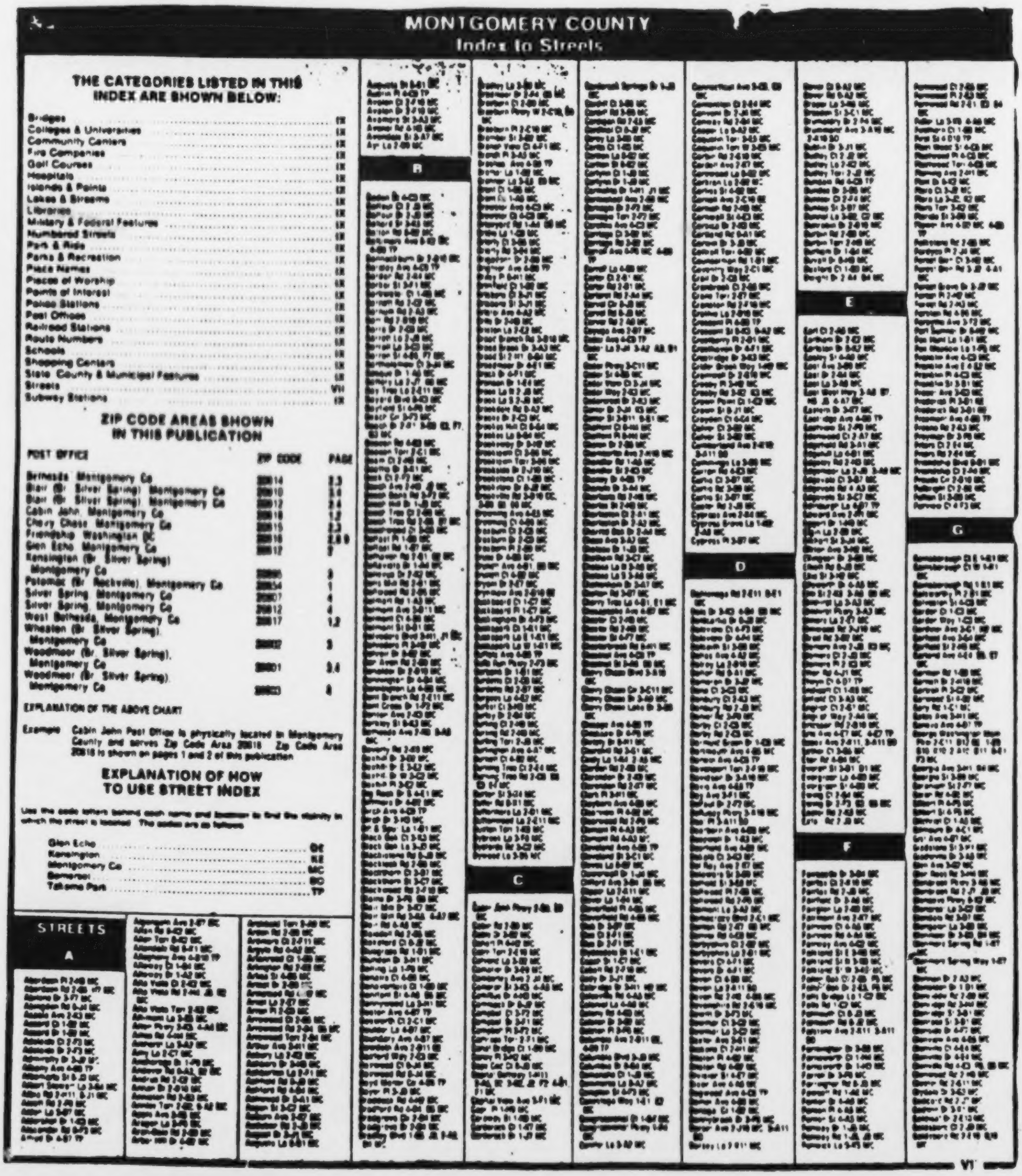

MONTGOMERY COUNTY
Index to Streets

THE CATEGORIES LISTED IN THIS INDEX ARE SHOWN BELOW:

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Colleges & Universities IX
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ZIP CODE AREAS SHOWN IN THIS PUBLICATION

POST OFFICE	ZIP CODE	PAGE
Bethesda, Montgomery Co	20814	2,3
Blair (Br. Silver Spring), Montgomery Co	20910	3,4
Blair (Br. Silver Spring), Montgomery Co	20912	3,4
Cabin John, Montgomery Co	20818	1,2
Chevy Chase, Montgomery Co	20815	2,3
Friendship, Washington DC	20016	2,8,9
Glen Echo, Montgomery Co	20812	7
Kensington (Br. Silver Spring) Montgomery Co	20895	3
Potomac (Br. Rockville), Montgomery Co	20854	1
Silver Spring, Montgomery Co	20907	4
Silver Spring, Montgomery Co	20912	4
West Bethesda, Montgomery Co	20817	1,2
Wheaton (Br. Silver Spring), Montgomery Co	20902	3
Woodmoor (Br. Silver Spring), Montgomery Co	20901	3,4
Woodmoor (Br. Silver Spring), Montgomery Co	20903	4

EXPLANATION OF THE ABOVE CHART

Example: Cabin John Post Office is physically located in Montgomery County and serves Zip Code Area 20818. Zip Code Area 20818 is shown on pages 1 and 2 of this publication.

EXPLANATION OF HOW TO USE STREET INDEX

Use the code letters behind each name and location to find the vicinity in which the street is located. The codes are as follows:

Glen Echo .... GE
Kensington .... KE
Montgomery Co .... MC
Somerset .... SO
Takoma Park .... TP

STREETS

A

B

C

D

E

F

G

VI

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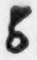
CASAS Objective 1.1.3 - Interpret maps and graphs
CASAS Objective 1.9.4 - Interpret maps
CASAS Objective 2.2.1 - Ask for, give, follow, or clarify directions
CASAS Objective 2.2.5 - Use maps relating to travel needs

Problems referring to map index and map on pages 3.4 and 3.5.

1. Locate the 6000 blocks of Bradley Blvd. What are the coordinates?
2. Locate Dudley Lane. What are the coordinates?
3. Would I take Old Georgetown Rd. or River Rd. to get to Beech Ave.?
4. Does Fernwood Rd. run North and South or East and West?
5. What are the coordinates for the Medical Center? How would you get there from 495?
6. What does this symbol  mean?
7. What are the coordinates for WMAL? How would I get there from River Rd.?

CASAS Objective 6.4 - Compute with percents, rate, ratio, or proportion

Objective: To solve pest control problems using proportion.

1. An insecticide label tells you to mix 2 2/3 ounces of concentrate with 1 gallon of water to get a 0.5% dilution. How many ounces of concentrate should you mix with 1/2 gallon of water to get your 0.5% dilution?

2. An insecticide tells you to dilute the concentrate by adding 1/2 fl. oz. to 1 gallon of water in order to get a .1% spray. If you want to mix up 3 gallons of the .1% spray, how much concentrate should you add to 3 gallons of water?

3. a) You are using a pressurized aerosol insecticide to treat for fleas. The label says that 100 square feet of area can be treated in 10 seconds. How many seconds will it take to treat the wall-to-wall carpeting of an empty room that measures 20 feet by 15 feet?
   b) Using the same product, how many seconds to treat a smaller room 12 feet by 15 feet?

4. You have calibrated your termite rig and found it takes 24 seconds to pump 1 gallon of termiticide through a 4-foot soil rod. How many seconds will it take to apply 1.75 gallons through the same rod?

CASAS Objective 6.4 - Compute with percents, rate, ratio, or proportion
CASAS Objective 6.4.2- Apply a percent in a context not involving money
CASAS Objective 6.4.3- Calculate percents

Objective: To find the percent of a number

1. 28% of your gross pay is withheld for Federal Income Tax. If you make $38,000, how much money is withheld for Federal Income Tax?

2. 20% of American Pest's business is for extermination of termites. If American Pest made $2,000,000 last year how much money was earned from extermination of termites?

3. 8% of American Pest's employees are females. American Pest employs 40 people. How many are female?

CASAS Objective 6.4.3 - Calculate percents

Objective: To find a percent

1. Last Tuesday 10 of your 50 stops on your route were at commercial establishments. What percent of your route was at commercial establishments?

2. Last Wednesday you spent 2 hours of your eight hour day in transit. What percentage of your day was spent in transit?

3. Of the original sixteen employees that elected to take our class only two did not return. What percentage did not return?

4. You have been baiting rats with small bait blocks placed inside bait stations. The label says that each bait block weighs 20 grams. Last week you placed 16 of the bait blocks in each of 3 new stations. This week, the bait stations contained the following:

   Station 1: 2 bait blocks
   Station 2: 5 bait blocks
   Station 3: 16 bait blocks

   What was the total weight (in grams) of rodenticide taken by rats in each of the stations?

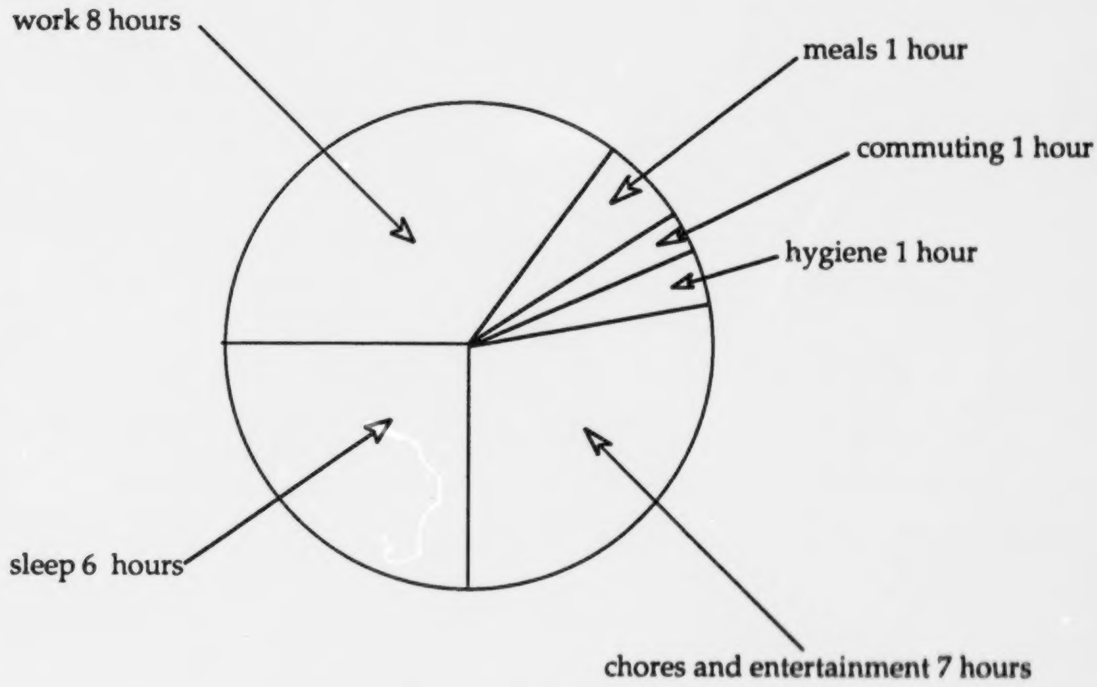
   Station 1:
   Station 2:
   Station 3:

   What percentage of *all* the rodenticide that you applied was taken by the rats?

CASAS Objective 6.7.4 - Interpret data given in a circle graph

Objective: To illustrate information in graph form

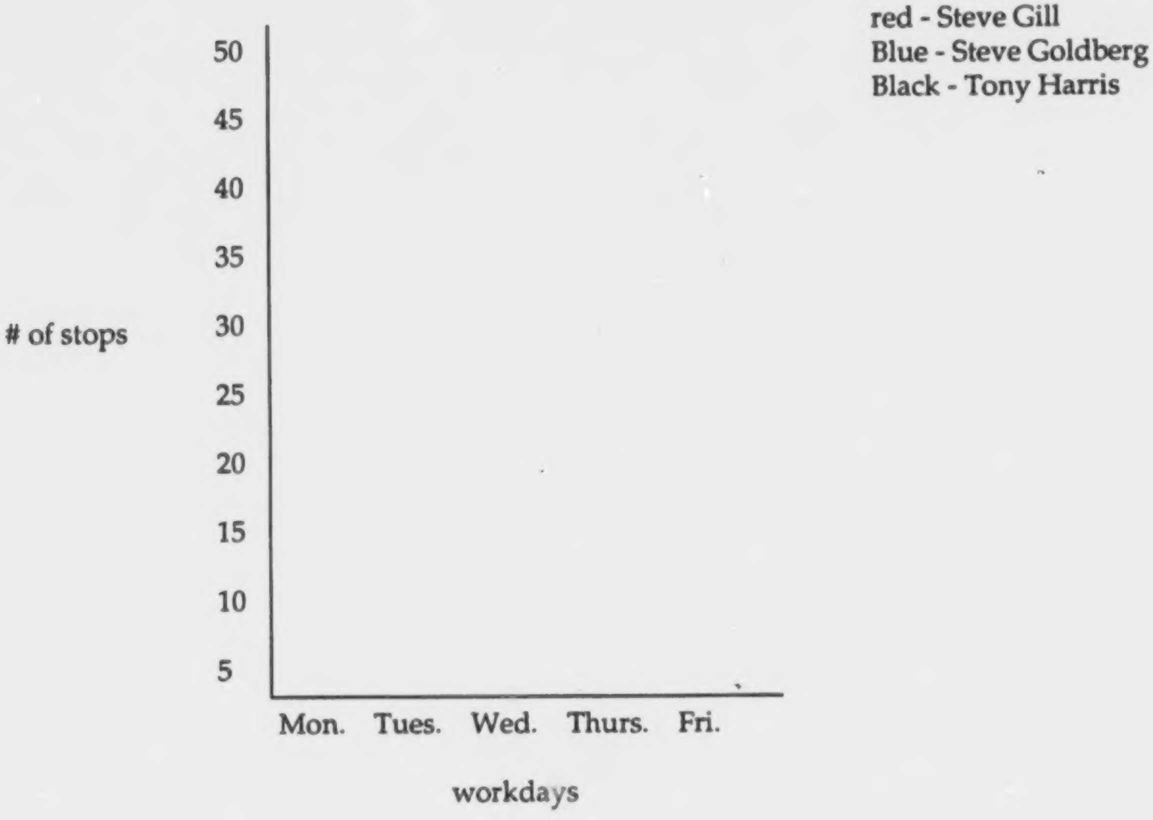
We collectively constructed a pie graph illustrating how a typical weekday is spent.



CASAS Objective 6.7.1 - Interpret data given in a line graph

Objective: To illustrate information in graph form

We collectively constructed a line graph illustrating the number of stops on individual routes using a different color line per individual.



CASAS Objective 6.4 - Compute with percents, rate, ratio, or porportion
CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions.

Pest[†]	Amount of DURSBAN 50W per		Specific Directions
	1000 sq. ft.	Acre	
White grubs (Such as: Black turfgrass ataenius, European chafer, Southern masked chafer and Japanese beetle larvae)(1)	1 1/2 to 3 oz.	4 lb. to 8 lb.	1. For white grubs, spray when grubs are young and actively feeding near the soil surface, usually during late July and August or as recommended by your local Agricultural Extension Service specialist. Immediately after spraying, irrigate the treated area with 1/2 to 1 inch of water to wash the insecticide into the underlying soil.
Bluegrass billbugs(1)	3/4 to 3 oz.	2 lb. to 8 lb.	1. For bluegrass billbugs spray early in the season when adults first appear. Retreat as needed.
Chiggers (Turkey Pens)(1)	3 oz.	8 lb.	1. For control of chiggers infesting outdoor turkey pens apply DURSBAN 50W as a spray to the soil using 100-150 gallons of water per acre. To prevent turkeys from becoming infested with chiggers, spray the soil in pens just before turkeys are transferred to them. For turkeys already infested with chiggers, spray the soil in pens thoroughly. Allow at least three weeks for chigger lesions on the turkeys to heal before turkeys are slaughtered. For optimum results, spray a 10-15 ft protective area around the periphery of the treated pens. Treatment is limited to 2 applications to the soil in turkey pens at intervals of not less than 4 weeks. Do not treat soil in turkey pens later than 7 days before turkeys are to be slaughtered. Avoid getting the spray on feed or in waterers. Open feed should be covered during spraying operations, and water troughs should be flushed out immediately after the spraying operations. Do not spray DURSBAN 50W directly on the turkeys.
Imported fire ants in commercial sod(1)	8 oz.	16 lbs.	1. **Imported fire ants:** Apply DURSBAN 50W as a spray to the area of sod to be cut. Immediately after applying the spray soak in with at least 1/2 acre-inch of water or a sufficient volume to thoroughly soak below the cut line. Do not apply a volume or rate of water to cause runoff. Sod can be cut when vegetation has dried and when soil is moist but not wet. **Precaution:** Personnel handling treated sod should wear elbow-length neoprene gloves and neoprene apron. Protective clothing and boots should be worn to prevent repeated skin exposure to treated sod. **Certification Period:** 42 days from day of application.

[†]Numbers in parentheses refer to Specific Directions.

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CASAS Objective 6.4 - **Compute with percents, rate, ratio, or porportion**
CASAS Objective 4.4.3 - **Recognize and use occupational signs, charts, forms, and written directions.**

Objective: Using directions on page 3.12, answer the following questions.

1. To control chiggers in turkey pens use 3 ounces of DURSBAN per 1000 sq. feet. How much DURSBAN would you use for 5,280 sq. feet?

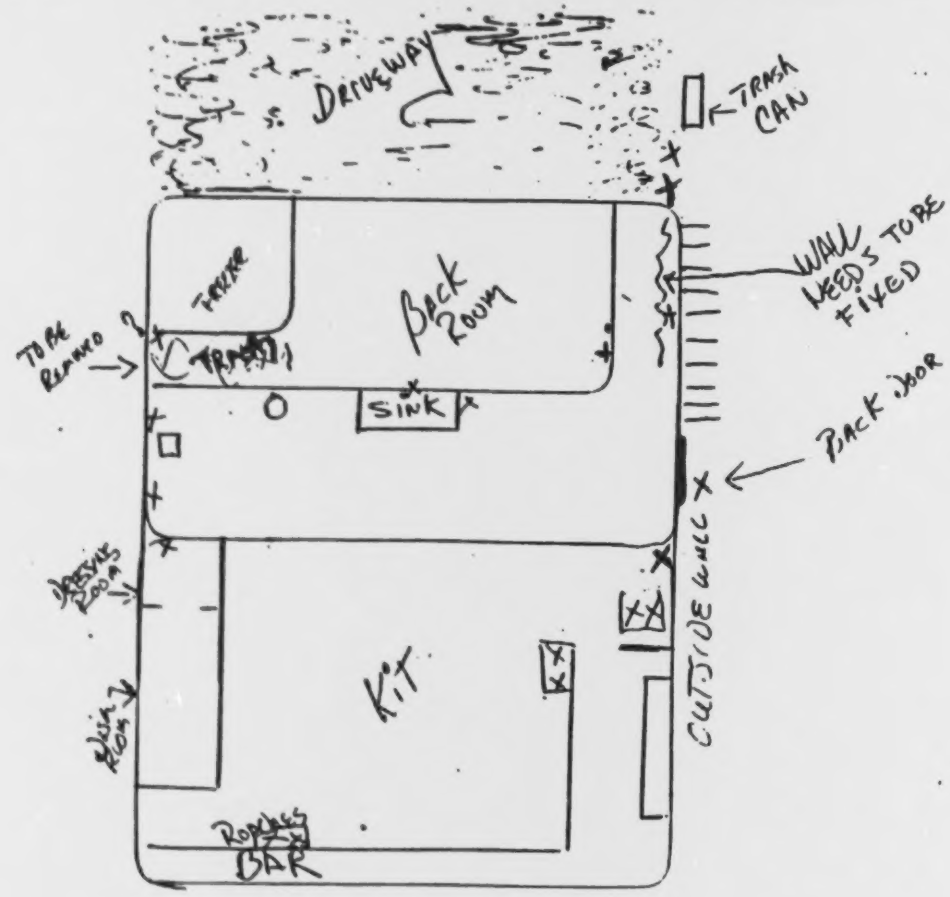
2. 16 lbs. of DURSBAN per acre is the correct ratio to control imported fire ants. How much DURSBAN would you need for 243 acres?

3. 3 oz. of DURSBAN per 1000 sq. feet is the ratio of pesticide to area. How much DURSBAN would you need to treat 2,498 sq. feet?

4. You use 1 1/2 oz. DURSBAN per 1000 sq. feet to treat white grubs. How much DURSBAN will you use for 450,000 sq. feet?

5. When should you spray for white grubs?

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions.


DRIVEWAY
TRASH CAN
WALL NEEDS TO BE FIXED
BACK DOOR
FREEZER
TRASH
TO BE REMOVED
Back Room
SINK
DRESSING ROOM
Dinin Room
Kit
OUTSIDE WALL
ROACHES
BAR

X = RAT HOLE.

XX Roaches

Check upstairs BAR Also

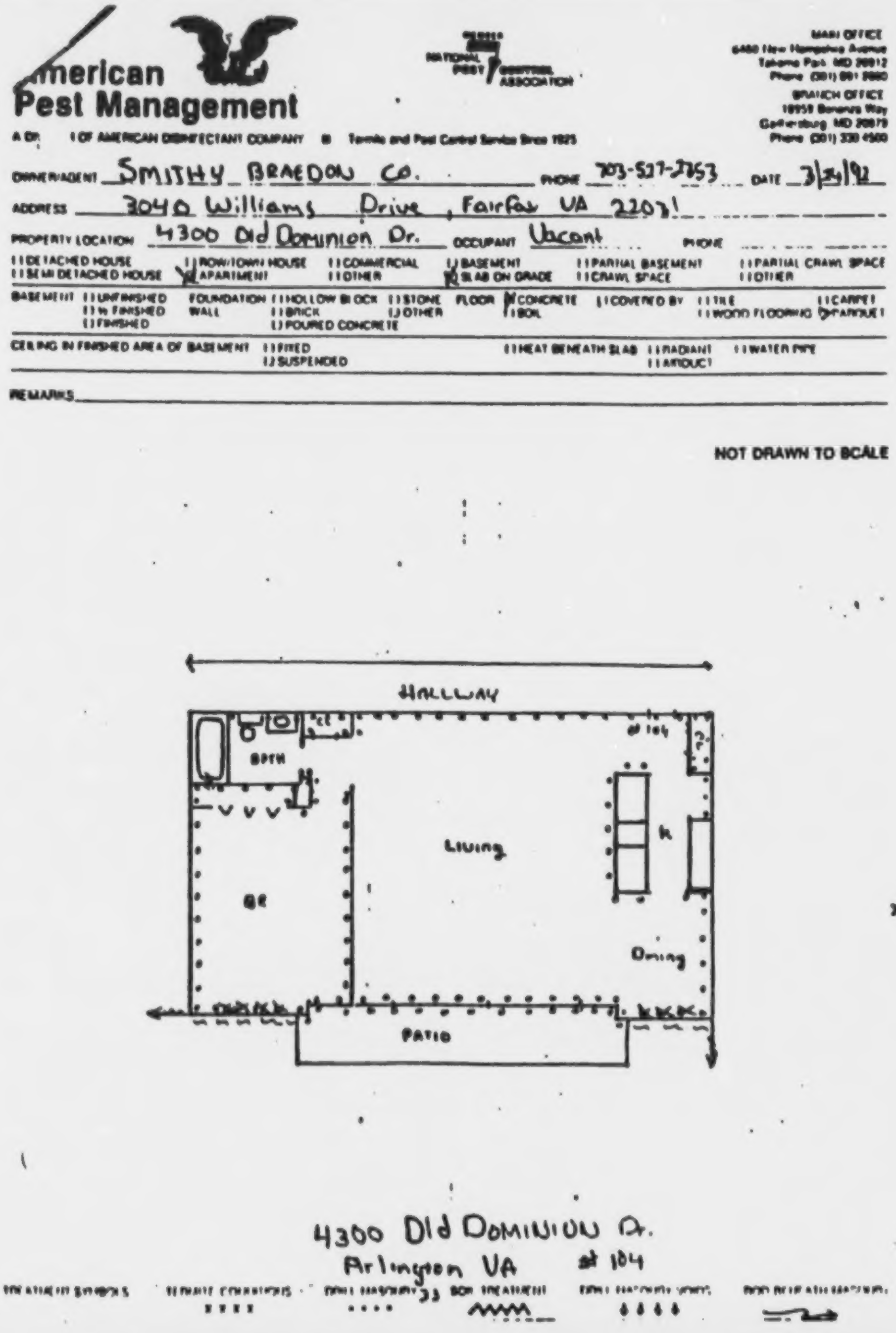
Kit's VERY BAD.
Check R.o also.

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions.

Objective: Using the diagram on page 3.14, answer the following questions.

1. What kind of place is shown in this diagram?
2. What made you decide on your answer to question 1?
3. Where is the legend on this diagram?
4. What do the symbols tell you?
5. How many places were roaches located at this site? Where?
6. How many rat holes were found at this site? Where?
7. Where is trash put inside this establishment?
8. Where is the back door located?
9. What wall needs to be fixed?
10. Where is the freezer?

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions.



American Pest Management

A DIVISION OF AMERICAN DISINFECTANT COMPANY ■ Termite and Pest Control Service Since 1925

NATIONAL PEST CONTROL ASSOCIATION

MAIN OFFICE
6480 New Hampshire Avenue
Takoma Park, MD 20912
Phone (301) 891-2660

BRANCH OFFICE
18959 Bonanza Way
Gaithersburg, MD 20879
Phone (301) 330-4500

OWNER/AGENT SMITHY BRAEDON CO. PHONE 703-527-2753 DATE 3/24/92

ADDRESS 3040 Williams Drive, Fairfax VA 22031

PROPERTY LOCATION 4300 Old Dominion Dr. OCCUPANT Vacant PHONE

☐ DETACHED HOUSE ☐ SEMI DETACHED HOUSE ☐ ROW/TOWN HOUSE ☒ APARTMENT ☐ COMMERCIAL ☐ OTHER ☐ BASEMENT ☒ SLAB ON GRADE ☐ PARTIAL BASEMENT ☐ CRAWL SPACE ☐ PARTIAL CRAWL SPACE ☐ OTHER

BASEMENT ☐ UNFINISHED ☐ ½ FINISHED ☐ FINISHED FOUNDATION WALL ☐ HOLLOW BLOCK ☐ BRICK ☐ POURED CONCRETE ☐ STONE ☐ OTHER FLOOR ☒ CONCRETE ☐ SOIL ☐ COVERED BY ☐ TILE ☐ WOOD FLOORING ☐ CARPET ☒ PARQUET

CEILING IN FINISHED AREA OF BASEMENT ☐ FIXED ☐ SUSPENDED ☐ HEAT BENEATH SLAB ☐ RADIANT ☐ AIRDUCT ☐ WATER PIPE

REMARKS

NOT DRAWN TO SCALE

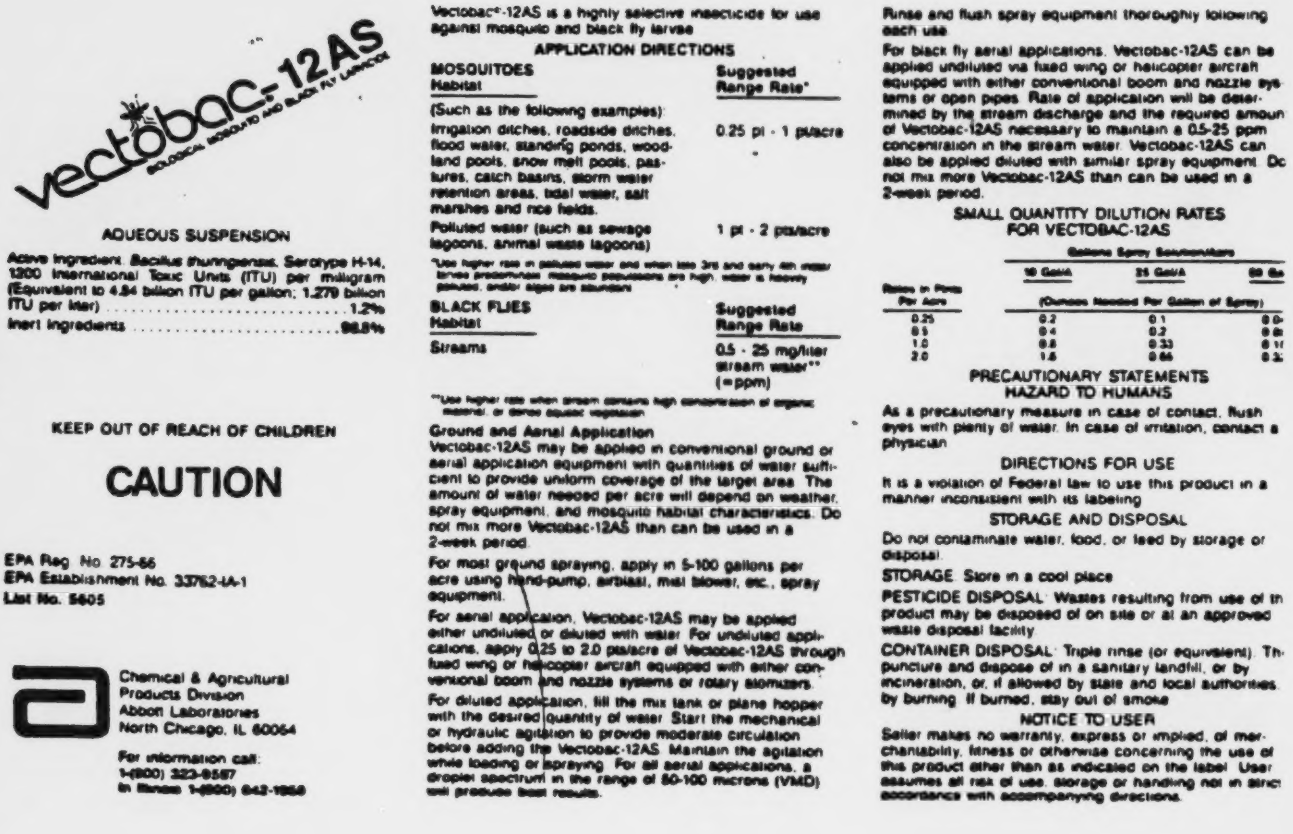
4300 Old Dominion Dr.
Arlington VA # 104

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions.

Objective: Using the diagram on page 3.16, answer the following questions.

1. What kind of location is illustrated in the floor plan?
2. What size apartment is it?
3. On what floor is the apartment? How do you know that?
4. What would the patio be called if this was a second floor apartment?
5. What is the symbol for termite conditions? Find the legend on this paper.
6. Where did the first inspection locate termites?
7. What kind of floor does this apartment have?
8. What kind of floor covering does this apartment have?
9. What do the dots stand for on the diagram?
10. How far apart does the applicator drill the holes?
11. Why does he put them around the entire apartment?
12. What other information do you get on this form?
13. How does this information help you do your job?

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions
CASAS Objective 6.4- Compute with percents, rate, ratio, or proportion



vectobac-12AS
BIOLOGICAL MOSQUITO AND BLACK FLY LARVICIDE

AQUEOUS SUSPENSION

Active Ingredient: *Bacillus thuringiensis*, Serotype H-14, 1200 International Toxic Units (ITU) per milligram (Equivalent to 4.84 billion ITU per gallon; 1.279 billion ITU per liter) 1.2%
Inert Ingredients 98.8%

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA Reg. No. 275-66
EPA Establishment No. 33762-IA-1
List No. 5605

Chemical & Agricultural
Products Division
Abbott Laboratories
North Chicago, IL 60064

For information call:
1-(800) 323-9597
In Illinois 1-(800) 642-1958

Vectobac®-12AS is a highly selective insecticide for use against mosquito and black fly larvae

APPLICATION DIRECTIONS

MOSQUITOES Habitat	Suggested Range Rate*
(Such as the following examples):	
Irrigation ditches, roadside ditches, flood water, standing ponds, woodland pools, snow melt pools, pastures, catch basins, storm water retention areas, tidal water, salt marshes and rice fields.	0.25 pt - 1 pt/acre
Polluted water (such as sewage lagoons, animal waste lagoons)	1 pt - 2 pts/acre

*Use higher rate in polluted water and when late 3rd and early 4th instar larvae predominate, mosquito populations are high, water is heavily polluted, and/or algae are abundant.

BLACK FLIES Habitat	Suggested Range Rate
Streams	0.5 - 25 mg/liter stream water** (=ppm)

**Use higher rate when stream contains high concentration of organic material, or dense aquatic vegetation.

Ground and Aerial Application
Vectobac-12AS may be applied in conventional ground or aerial application equipment with quantities of water sufficient to provide uniform coverage of the target area. The amount of water needed per acre will depend on weather, spray equipment, and mosquito habitat characteristics. Do not mix more Vectobac-12AS than can be used in a 2-week period.

For most ground spraying, apply in 5-100 gallons per acre using hand-pump, airblast, mist blower, etc., spray equipment.

For aerial application, Vectobac-12AS may be applied either undiluted or diluted with water. For undiluted applications, apply 0.25 to 2.0 pts/acre of Vectobac-12AS through fixed wing or helicopter aircraft equipped with either conventional boom and nozzle systems or rotary atomizers.

For diluted application, fill the mix tank or plane hopper with the desired quantity of water. Start the mechanical or hydraulic agitation to provide moderate circulation before adding the Vectobac-12AS. Maintain the agitation while loading or spraying. For all aerial applications, a droplet spectrum in the range of 80-100 microns (VMD) will produce best results.

Rinse and flush spray equipment thoroughly following each use.

For black fly aerial applications, Vectobac-12AS can be applied undiluted via fixed wing or helicopter aircraft equipped with either conventional boom and nozzle systems or open pipes. Rate of application will be determined by the stream discharge and the required amoun of Vectobac-12AS necessary to maintain a 0.5-25 ppm concentration in the stream water. Vectobac-12AS can also be applied diluted with similar spray equipment. Do not mix more Vectobac-12AS than can be used in a 2-week period.

SMALL QUANTITY DILUTION RATES
FOR VECTOBAC-12AS

	Gallons Spray Solution/Acre		
	10 Gal/A	25 Gal/A	50 Ga
Rates in Pints Per Acre	(Ounces Needed Per Gallon of Spray)		
0.25	0.2	0.1	0.0
0.5	0.4	0.2	0.0
1.0	0.8	0.33	0.1
2.0	1.6	0.66	0.3

PRECAUTIONARY STATEMENTS
HAZARD TO HUMANS

As a precautionary measure in case of contact, flush eyes with plenty of water. In case of irritation, contact a physician.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

STORAGE: Store in a cool place.

PESTICIDE DISPOSAL: Wastes resulting from use of th product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Th puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

NOTICE TO USER

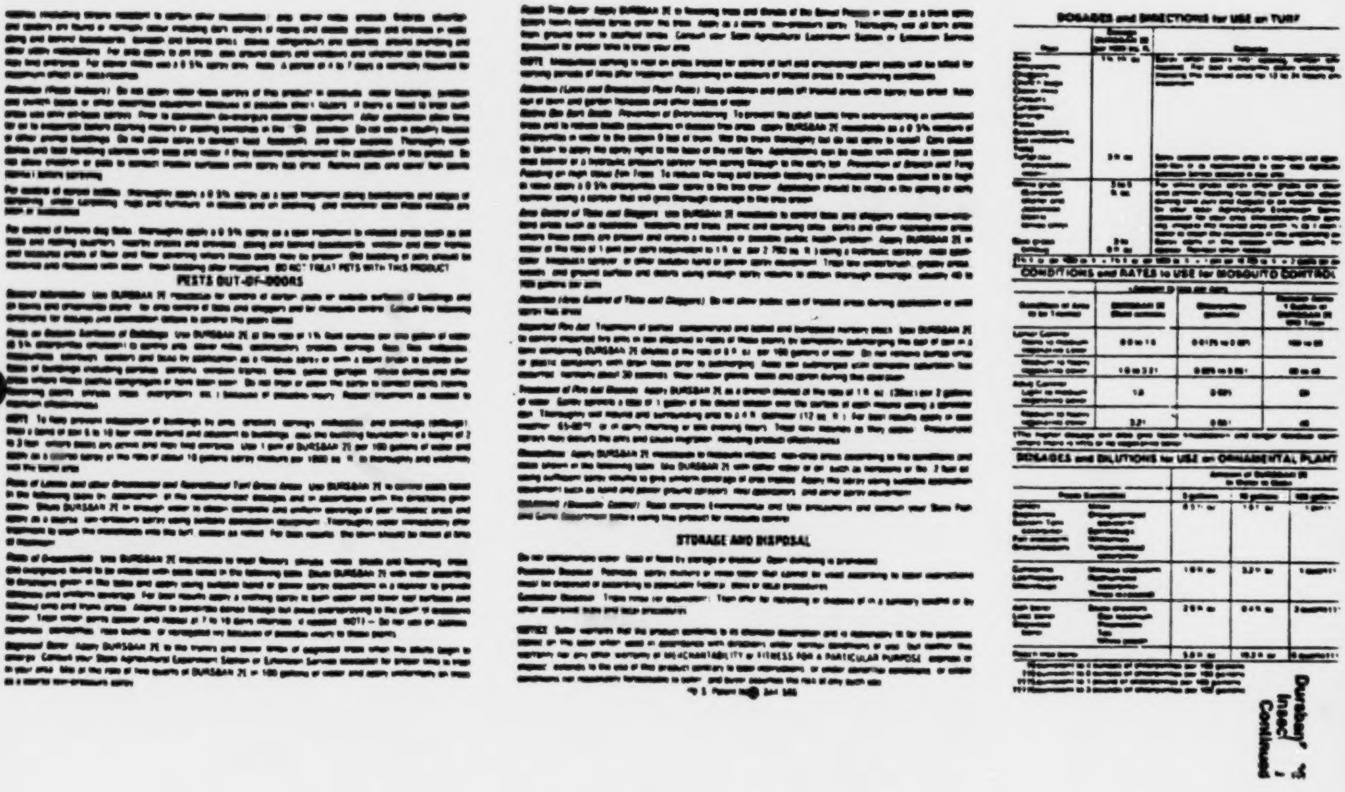
Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. User assumes all risk of use, storage or handling not in strict accordance with accompanying directions.

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions
CASAS Objective 6.4- Compute with percents, rate, ratio, or proportion

Objective: Using the information on page 3.18, answer the following questions.

1. You need .25 pints per acre of this chemical. How many pints would you need for 250 acres? 255 acres? 460 acres? 485 acres?
2. You need .2 ounces per gallon of spray. How many ounces for 25 gallons? 40 gallons? 75 gallons? 90 gallons?
3. What is this pesticide for? In what form is it on this label?
4. Where would you call for information about this chemical?
5. How many times must you rinse a container before you dispose of it?

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions
CASAS Objective 6.4 - Compute with percents, rate, ratio, or proportion



PESTS OUT-OF-DOORS

STORAGE AND DISPOSAL

DOSAGES and DIRECTIONS for USE on TURF

CONDITIONS and RATES to USE for MOSQUITO CONTROL

DOSAGES and DILUTIONS for USE on ORNAMENTAL PLANT

Dursban®
Insect
Continued

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CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions
CASAS Objective 6.4- Compute with percents, rate, ratio, or proportion

Objective: Using the information on page 3.20, answer the following questions.

1. You need 1.5 fluid ounces of Dursban 2E per acre to control adult mosquitoes. How many ounces of Dursban 2E do you need for 2500 acres?
2. For control of ants you need 1 1/2 fl. oz. of Dursban 2E per 1000 square feet. How much Dursban 2E do you need for 5,240 sq. feet? 2500 sq. feet? 50,000 sq. feet?
3. How much Dursban 2E per acre do you need for medium to heavy vegetation cover (fluid ounces)? How much Dursban 2E would you need for 25 acres? 400 acres? 575 acres?
4. How do you treat the dogwood borer with this chemical?

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

EXHIBIT SHEET

Organic Phosphates

- average 2 to 3 weeks residual life
- moderately quick acting
- deactivated quickly by heat and moisture

Examples:

1. Diazinon
2. Dursban
3. Malathion
4. Korlan (Ronnel)
5. Dibrom
6. Entex
7. Dipterex--water soluble, no odor, useful as bait
8. DDVP--no residual, good vapor action

Carbamates

- similar to Organic Phosphates

Examples:

1. Baygon
2. Sevin

Chlorinated Hydrocarbons

- slow acting
- long lasting

Examples:

1. DDT
2. Chlordane
3. Dieldrin
4. Aldrin
5. Heptachlor

Used in subterranean termite control

6. Kepone--useful only as bait

Pyrethrins & Synthetic Pyrethroids (man-made)

- little or no residual life
- good flushing action
- good knockdown action

Examples:

1. Pyrethrins - made from daisy-type flowers.
   - a synergist piperonyl butoxide is often added to increase efficiency.
2. Synthetic Pyrethroids
   - A. Allethrin
   - B. SBP 1382

Inorganics

- long lasting compounds
- slow acting
- useful as baits or dusts

Examples:

1. Sodium flouride
2. Boric Acid
3. Silica gels - (Dri-Die)
4. Phosphorous paste

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

Post Test

COMMON INSECTICIDES

Using the following list, identify to what group each of the following insecticides belong.

CLASS:

Organic Phosphates

Carbamates

Chlorinated Hydrocarbons

Pyrethrins and synthetic pyrethroids

Inorganics

1. Diazinon ____________________
2. Sevin ____________________
3. DDT ____________________
4. Allethrin ____________________
5. SBP 1382 ____________________
6. Sodium Fluoride ____________________
7. Chlordane ____________________
8. Pyrethrins ____________________
9. Boric Acid ____________________
10. Dieldrin ____________________
11. Heptachlor ____________________
12. Phosphorous Paste ____________________
13. Entex ____________________

NOW TURN THE PAGE.

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

Post Test
(continued)

14. Malathion ____________________

15. Dibrom ____________________

16. Kepone ____________________

17. Baygon ____________________

18. Silica gel ____________________

19. Aldrin ____________________

20. DDVP ____________________

21. Dursban ____________________

22. Dipterex ____________________

23. Which of the following can be used as a bait?

    A. Chlordane

    B. Phosphorus Paste

    C. Diazinon

    D. Pyrethrins

24. Which of these is used in subterranean termite control?

    A. Chlordane

    B. Dieldrin

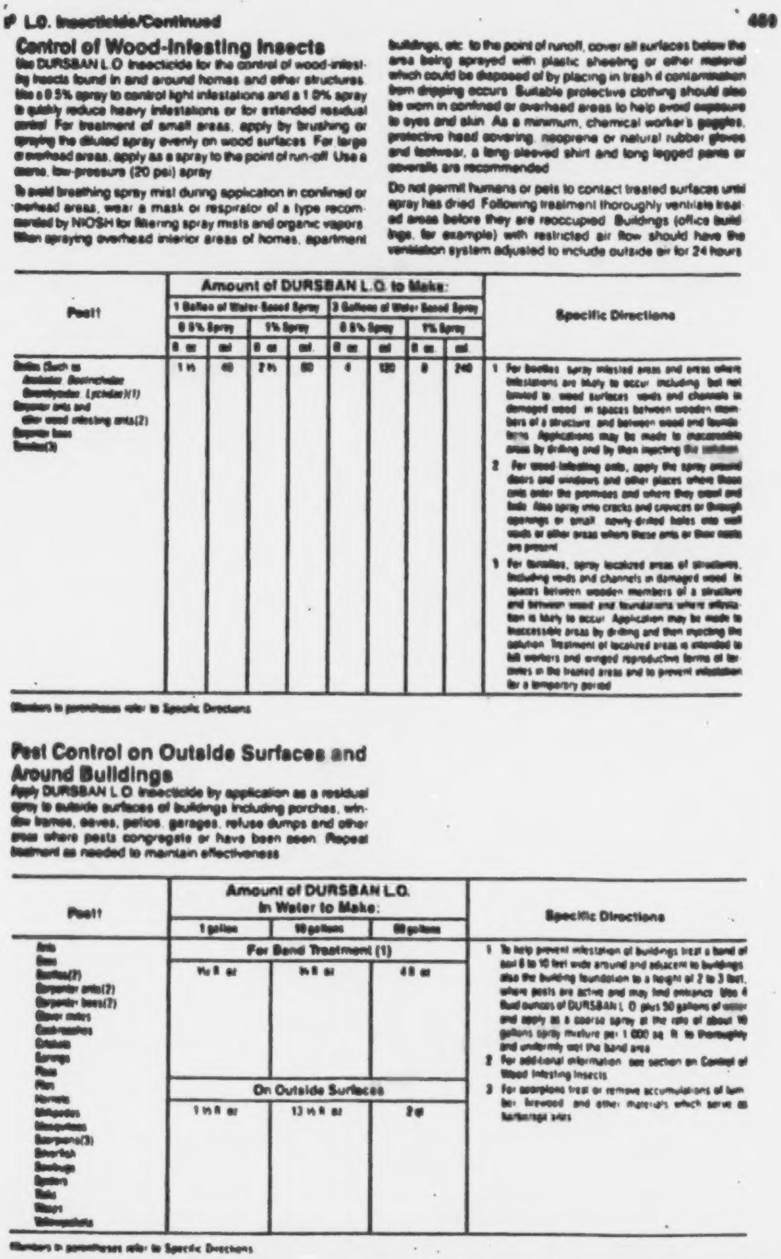
    C. Heptachlor

    D. All of the above

NOW TURN THE PAGE.

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions.

CASAS Objective 6.4 - Compute with percents, rate, ratio, or proportion.



L.O. Insecticide/Continued 480

Control of Wood-Infesting Insects

Use DURSBAN L.O. Insecticide for the control of wood-infesting insects found in and around homes and other structures. Use a 0.5% spray to control light infestations and a 1.0% spray to quickly reduce heavy infestations or for extended residual control. For treatment of small areas, apply by brushing or spraying the diluted spray evenly on wood surfaces. For large or overhead areas, apply as a spray to the point of run-off. Use a coarse, low-pressure (20 psi) spray.

To avoid breathing spray mist during application in confined or overhead areas, wear a mask or respirator of a type recommended by NIOSH for filtering spray mists and organic vapors. When spraying overhead interior areas of homes, apartment buildings, etc. to the point of runoff, cover all surfaces below the area being sprayed with plastic sheeting or other material which could be disposed of by placing in trash if contamination from dripping occurs. Suitable protective clothing should also be worn in confined or overhead areas to help avoid exposure to eyes and skin. As a minimum, chemical worker's goggles, protective head covering, neoprene or natural rubber gloves and footwear, a long sleeved shirt and long legged pants or coveralls are recommended.

Do not permit humans or pets to contact treated surfaces until spray has dried. Following treatment thoroughly ventilate treated areas before they are reoccupied. Buildings (office buildings, for example) with restricted air flow should have the ventilation system adjusted to include outside air for 24 hours.

Pest†	Amount of DURSBAN L.O. to Make:								Specific Directions
	1 Gallon of Water-Based Spray				3 Gallons of Water-Based Spray				
	0.5% Spray		1% Spray		0.5% Spray		1% Spray		
	fl oz	ml	fl oz	ml	fl oz	ml	fl oz	ml	
Beetles (Such as *Anobiidae, Bostrichidae, Cerambycidae, Lyctidae*)(1) Carpenter ants and other wood infesting ants(2) Carpenter bees Termites(3)	1⅓	40	2⅔	80	4	120	8	240	1 For beetles: spray infested areas and areas where infestations are likely to occur including, but not limited to, wood surfaces, voids and channels in damaged wood, in spaces between wooden members of a structure, and between wood and foundations. Applications may be made to inaccessible areas by drilling and by then injecting the solution. 2 For wood-infesting ants, apply the spray around doors and windows and other places where these ants enter the premises and where they crawl and hide. Also spray into cracks and crevices or through openings or small, newly-drilled holes into wall voids or other areas where these ants or their nests are present. 3 For termites, spray localized areas of structures, including voids and channels in damaged wood, in spaces between wooden members of a structure and between wood and foundations where infestation is likely to occur. Application may be made to inaccessible areas by drilling and then injecting the solution. Treatment of localized areas is intended to kill workers and winged reproductive forms of termites in the treated areas and to prevent infestation for a temporary period.

†Numbers in parentheses refer to Specific Directions

Pest Control on Outside Surfaces and Around Buildings

Apply DURSBAN L.O. Insecticide by application as a residual spray to outside surfaces of buildings including porches, window frames, eaves, patios, garages, refuse dumps and other areas where pests congregate or have been seen. Repeat treatment as needed to maintain effectiveness.

Pest†	Amount of DURSBAN L.O. In Water to Make:			Specific Directions
	1 gallon	10 gallons	50 gallons	
Ants Bees Beetles(2) Carpenter ants(2) Carpenter bees(2) Clover mites Cockroaches Crickets Earwigs Fleas Flies Hornets Millipedes Mosquitoes Scorpions(3) Silverfish Sowbugs Spiders Ticks Wasps Yellowjackets	For Band Treatment (1)			1 To help prevent infestation of buildings treat a band of soil 6 to 10 feet wide around and adjacent to buildings. Also the building foundation to a height of 2 to 3 feet, where pests are active and may find entrance. Use 4 fluid ounces of DURSBAN L.O. plus 50 gallons of water and apply as a coarse spray at the rate of about 10 gallons spray mixture per 1,000 sq. ft. to thoroughly and uniformly wet the band area. 2 For additional information, see section on Control of Wood Infesting Insects. 3 For scorpions treat or remove accumulations of lumber, firewood, and other materials which serve as harborage sites.
	1/12 fl oz	¾ fl oz	4 fl oz	
	On Outside Surfaces			
	1⅓ fl oz	13⅓ fl oz	2 qt	

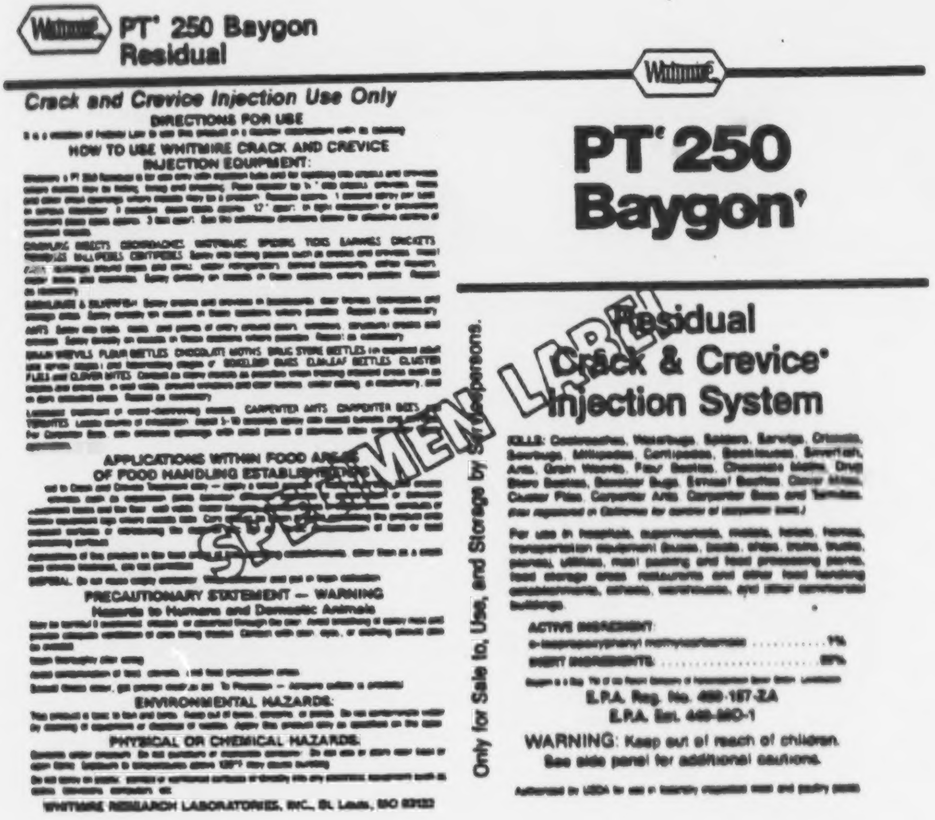
†Numbers in parentheses refer to Specific Directions

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions.
CASAS Objective 6.4 - Compute with percents, rate, ratio, or proportion.

Objective: Using the information on page 3.25, answer the following questions.

1. If you need 1/2 fl. oz. for 1 gallon, how much Dursban do you need for 48 gallons?
2. If 3/4 fl oz. is needed for 10 gallons (Band Treatment), how much Dursban is needed for 46 gallons?
3. If 1 1/3 fl. oz. is needed for 1 gallon on outside surfaces, how many ounces are needed for 75 gallons?
4. 13 1/2 fl. oz. of Dursban is needed for 10 gallons of water on outside surfaces. How much Dursban is needed for 126 gallons?
5. What is the minimum protective clothing recommended when using this chemical?

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions.



PT° 250 Baygon Residual

Crack and Crevice Injection Use Only

DIRECTIONS FOR USE

HOW TO USE WHITMIRE CRACK AND CREVICE INJECTION EQUIPMENT:

APPLICATIONS WITHIN FOOD AREAS OF FOOD HANDLING ESTABLISHMENTS

PRECAUTIONARY STATEMENT — WARNING

Hazards to Humans and Domestic Animals

ENVIRONMENTAL HAZARDS:

PHYSICAL OR CHEMICAL HAZARDS:

WHITMIRE RESEARCH LABORATORIES, INC., St. Louis, MO

PT° 250 Baygon°

Residual Crack & Crevice° Injection System

ACTIVE INGREDIENT:

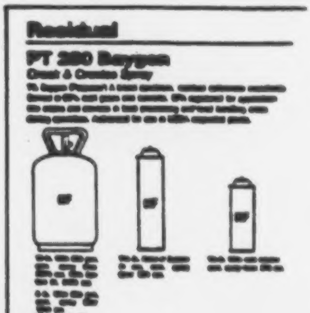
INERT INGREDIENTS:

E.P.A. Reg. No. 499-187-ZA

E.P.A. Est. 499-MO-1

WARNING: Keep out of reach of children. See side panel for additional cautions.

Only for Sale to, Use, and Storage by Serviceperson.



Residual

PT 250 Baygon

Crack & Crevice Spray

BEST COPY AVAILABLE

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions.

Objective: Using the information on page 3.27, answer the following questions.

1. What are the uses of this chemical?
2. What does the word inert mean?
3. Are there any environmental hazards with this product? What are they?
4. How would you use this chemical on termites?
5. Who can buy, use, and store this product?

BROWN STATION ROAD

Site: Prince George's County Public Schools
Facilities Department of Brown Station Road, Upper Marlboro, MD.

Instructor: Betty Sonneveldt

Time: Work Release
Class 1& 2- March 29, 1991 - July 10, 1991
Monday and Wednesday
Class 1 - 7:30 - 9:30 AM, Class 2 - 2:00 - 4:00 PM

Class 3& 4- March 30, 1991 - July 8, 1991
Tuesday and Thursday
Class 3 - 7:30 - 9:30 AM, Class 4 - 2:00 - 4:00 PM

Class 5& 6- July 10, 1991 - September 4, 1991
Monday and Wednesday
Class 5 - 7:30 - 9:30 AM, Class 6 - 2:00 - 4:00 PM

Class 7& 8- July 11, 1991 - September 17, 1991
Tuesday and Thursday
Class 7 - 7:30 - 9:30 AM, Class 8 - 2:00 - 4:00 PM

Class 9 - October 7, 1991 - December 18, 1991
Monday and Wednesday
7:30 - 9:30 AM

Class 10 - October 8, 1991 - December 13, 1991
Tuesday and Thursday
7:30 - 9:30 AM

Class 11 - October 8, 1991 - December 19, 1991
Tuesday and Thursday
2:30 - 4:30 PM

Class 12 - January 27, 1992 - March 8, 1992
Monday and Wednesday
7:30 - 9:30 AM

Class 13 - January 28, 1992 - March 14, 1992
Tuesday and Thurday
7:30 - 9:30 AM

Class 14 - March 16, 1992 - June 23, 1992
Tuesday andThursday
7:30 - 9:30 AM

Student: Male employees who maintain the buildings and grounds of Prince George's County School System.

Instructor Summary:

Workplace education classes at the Facilities Maintenance Base on Brown Station Road enjoy continued interest and participation by the employees in the classes offered there. The program began with four classes, one basic reading class, two middle level classes with instruction in both math and language skills, and one upper level class with instruction in both math and language skills. Some participants only took one hour of class per meeting, but the majority of the students attended classes four hours per week. Classes met from 7:30 A.M. - 9:30 A.M. and from 2:30 P.M. - 4:30 P.M. Monday through Thursday. From the beginning of classes, it was obvious that the majority of the students preferred morning classes and the upper level and lower level students demonstrated the most commitment to the program. At the end of the first ten weeks of classes the afternoon classes were combined into one class and a new afternoon class was started for employees from the maintenance garage. This second ten weeks went very well because the few students not really committed to the program had declined to attend the second ten weeks. The lower level class was remarkable in attendance and educational advances, and the upper level math class also mastered a lot of material. At the end of twenty weeks of class, there was a recognition program. Fifty two people were recognized as participants in the program and one employee, Buddy Frost, earned his GED diploma.

This site was awarded more classes after the first twenty weeks . The reading and basic skills class continued, as did the advanced math and writing skills class. One afternoon class continued and the students from the garage were fed into other classes. Again, participation was steady and interest high in classes. The advanced math class did an overview of algebra and geometry and the Basic Skills class progressed tremendously in reading skills and comprehension. At the end of this ten week session, there was a Christmas break, and again Brown Station Road was granted more classes.

For the fourth ten week session, the reading and basic skills class continued with the addition of four new students. This class was always individualized, but the ability range widened with the addition of the new people. They were from the Grounds Shop, so they were with co-workers, but their skills were both above and below the general level of the existing class. It worked out well because the group was cohesive.

The other class was made up of two one-hour classes. The advanced math students continued in math and a new class was formed by twelve people from the Sheet Metal Shop for math and geometrical drawing. This class also contained one student from a discontinued class. This class was challenging to teach and a really rewarding classroom experience. Peer tutoring was established in the basic skills class and the new math class wanted as much as the teacher could do and more. The advanced math class met personal goals and they did not see an end to their pursuit of this subject. They continued to work in materials supplied by the teacher even though the class had ended.

The final ten week class at Brown Station Road was a continuation of the math class for the Sheet Metal Shop. They had a two hour session this time, and they completed the geometry needed for their jobs. The mechanical drawing exercises using rulers, compasses, and protractors were taken from sheet metal construction manuals on loan from the shop and a mechanical drawing book from the shop. This class was challenging and exciting for the teacher because students continued to want as much material as could be delivered in the allotted time. Another student recognition ceremony was held after fifty weeks of classes. Forty students were awarded certificates for completing ten, twenty, thirty, or forty weeks of classes.

This workplace site is an excellent place to hold classes because of continued interest by the students, support personnel, and supervisory people. Every accommodation was made for this program including work release time, classroom space and time, copying privileges, needed materials, communication and promotion of the program, and refreshments and decorations for the awards programs. Many of the shop supervisors continued to encourage and support participation in learning programs. Most employees at this site were eager and interested learners and proved to be committed participants. There is a genuine group feeling at Brown Station Road. Many of the workers have known each other for many years. This respect and caring for one another gives adult students a good support system which allows for achievement in education, and makes meeting personal goals much easier for them.

WE MAKE IT HAPPEN

Facilities Services, a part of the Division of Supporting Services, is comprised of 921 custodial personnel. These custodians are responsible for maintaining all buildings and grounds in the Prince George's County Public School System in a clean, attractive and safe condition.

In addition to general and heavy duty cleaning, this department is also responsible for the operation of heating, ventilation and air-conditioning equipment, pest extermination and termite control, snow removal, assistance to facility user groups and the sanding, painting and finishing of gym floors and stages.

To help illustrate the magnitude of these responsibilities, consider the following facts and figures:

178	school buildings
180	temporary classrooms
8	office buildings
16,000,000	square feet of floors to sweep and clean
50,000	venetian blinds to clean
400,000	window panes to wash
110	miles of sidewalks to remove snow and debris from
61	gym floors to sand and refinish
2.500	gallons of paint and sealer used to refinish gyms
12	miles of masking tape used to re-line gyms
33.000	plumbing fixtures to clean and sanitize
400,000	pieces of furniture to clean
110,000	light fixtures to clean
48,000	fluorescent lamps to replace
15.400	gallons of floor wax used
5,100	facility use requests to process and control
6,900	gallons of concentrated cleaner used
203,290	pounds of floor sweeping compound used
38,346,000	paper towels to replace
516,000	plastic trash bags used and disposed
21,648	cans of scouring powder used
526	gallons of carpet shampoo used
96,336	rolls of toilet paper to replace
132,480	packs of sheet toilet paper to replace

Facilities Services continuously strives to attain and maintain high standards of excellence to provide the youth and adults of Prince George's County with a clean and safe place in which to pursue their educational goals.

FS-20 (6/84)

FASCINATING FACTS

(Believe It Or Not)

The Department of Facilities is made up of two sections: the Facilities Services, which provides custodial services, and the Facilities Operations, which provides maintenance and repair.

The goal of the department is to maintain a safe, pleasant learning environment that will add to staff and pupil morale as well as create respect and admiration for school property.

The attached list will help illustrate the major responsibilities of this department.

178	School buildings
7	Office buildings
142	Temporary classrooms
16,000,000	square feet of buildings
232	acres of roofing
50,000	Venetian blinds
400,000	Window panes
100,000	Pupil lockers
41	miles of fencing
110	miles of sidewalks
353	acres of blacktop
2,500	acres of lawns
5,500	pieces of playground equipment
20	Football stadiums
38,000	Stadium seats
61	Gymnasiums
30,000	Gymnasiums seats
15,000	Gym lockers
13,000	Doors
33,000	Plumbing fixtures
110,000	Lighting fixtures
550	Boilers
13,000	Heating units, radiators, air handlers
6,000	Thermostats
55	Language labs
2,500	Television sets
2,000	Sewing machines
400,000	pieces of furniture
1,000	Refrigeration units

5,000	Pieces of kitchen equipment (stoves, ovens, dishwashing machines, disposals, mixers, etc.)
1,363	Employees
49,208	Completed Maintenance Work Requests — July, 1985 to July, 1986
5,250	Requests for school facilities use by community and other user groups, yearly
48,000	Fluorescent lamps used, yearly
15,450	gallons of floor wax, yearly
44	tons of fertilizer, yearly
22	tons of marking lime for athletic fields, yearly
198	tons of refuse picked up, weekly
574	Floor buffing machines
530	Vacuum cleaners
180	Lawn mowers
12	miles of masking tape used to refinish gym floors, early summer
2,500	gallons of paint and refinishing material for gym floors, yearly
900	Window air conditioning units

BEST COPY AVAILABLE

CASAS Objective 6.1.0 - Identify the correct picture or appropriate response from oral cues.
CASAS Objective 6.1.5 - Perform multiple operations using whole numbers

Math problems for review of addition, subtraction, multiplication, and division. Facts for these problems come from your "We Make It Happen" and "Fascinating Facts" sheets.

1. There are 16,000,000 square feet of floors to sweep and clean each year. How many square feet of floors will be swept in five years?
2. There are 61 gym floors in the system. If 2500 gallons of paint and sealer are used to refinish these floors, approximately how many gallons of paint and sealer are used per gym?
3. There are 48,000 fluorescent lamps to replace each year. If each lamp gets replaced twice a year, how many replacement parts are used?
4. If 15,000 gallons of floor wax are used in one year, how much is used in six months?
5. One hundred ninety-eight tons of refuse are picked up weekly. How many tons are picked up monthly?
6. There are 900 window air conditioning units in the schools. If 365 of them need repair, how many do not need repair? If 15 people work on air conditioners in the HVAC shop, how many units must each person repair each year?
7. There are 2,500 T.V. sets in the schools. If the schools share the T.V. sets equally, about how many does each school have?
8. Twelve miles of masking tape are used to refinish gym floors each year. How many feet is this? How many yards?
9. There are 10,000 pupil lockers in the schools. If 465 of them must be repaired each year, how many do not need repair?
10. What is the total of paper towels, plastic trash bags, and packs of sheet toilet paper used?
11. Twenty-two tons of marking lime for athletic fields are used yearly. How many pounds is this?
12. There are 38,000 stadium seats in 20 football stadiums. If each stadium has the same number of seats, how many seats does each stadium have?
13. There are 2,500 acres of lawn to be mowed. If the grounds shop mows it all seven times a year, how many acres do they mow?

CASAS Objective 6.6.1 - Convert U.S. Standard and International Metric System of Measurement
CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles.
CASAS Objective 6.6.3 - Measure area and volume of geometric shapes
CASAS Objective 6.6.4 - Use measurement instruments
CASAS Objective 6.6.7 - Solve measurement problems in stipulated situations

Math problems for review of measurement. Use your "Fascinating Facts" and "We Make it Happen" sheets to get the information you need to answer the questions.

1. How many miles of fencing are there in the County School System? How many feet? How many yards?
2. How many gallons of paint are used yearly for gym floors? How many quarts?
3. How many tons of refuse are picked up weekly? Yearly? Daily? How many pounds of refuse are picked up weekly? Yearly? Daily?
4. How many fluorescent lamps are used yearly? How many dozen is this?
5. How many tons of fertilizer are used yearly? How many pounds is this?
6. How many miles of masking tape are used yearly to refinish gym floors? How many yards is this? How many feet?
7. How many gallons of floor wax are used yearly? If the wax comes in 5 gallon containers, how many containers are used each year?
8. How many gallons of concentrated cleaner are used each year? How many quarts is this? If it is in 8 quart containers, how many containers are there?
9. How many pounds of floor sweeping compound are used yearly? How many tons is this?
10. How many plastic trash bags are used yearly? If they are purchased in boxes of 4 dozen each, how many boxes does the school system buy yearly?

CASAS Objective 6.4 - Compute with percents, rate,ratio, or proportion.

Math problems for the review of ratio and proportion. Use your facts sheets to get the information you need.

1. What is the ratio of school buildings to office buildings?
2. What is the ratio of school buildings to gymnasiums?
3. What is the ratio of doors to school buildings? What is the ratio of doors to school buildings, office buildings and temporary classrooms?
4. What is the ratio of T.V. sets to school buildings?
5. What is the ratio of requests for school facilities use by community groups to school buildings?
6. If 2 gallons of floor wax is used on 4 rooms, how many are used on 64 rooms? Set up a proportion to solve this problem.
7. If 203,290 pounds of floor cleaner is used in 185 buildings, how much is used in one building?
8. One gallon of paint covers 200 square feet. How many gallons do you need for 4000 square feet?
9. If 49,208 maintenance work requests were completed in one year (52 weeks), how many were completed in 1 week?
10. If 22 tons of lime are used for fields in one year, how much lime is used in 3 1/2 years?

CASAS objective 6.4 - Compute with percents, rate ratio, or proportion.
CASAS Objective 6.4.3 - Calculate percents.
CASAS Objective 6.4.2 - Apply a percent in a context not involving money.

Math problems for review of percents. Use your facts sheets to get the information you need.

1. There are 100,000 pupil lockers in the schools. If 43% are replaced each year, how many are replaced?
2. There are 5,500 pieces of playground equipment. 23% of them are swings. How many are swings?
3. Of the 5,500 pieces of playground, 1,500 are repaired each year. What percent is repaired each year?
4. There are 178 school buildings, 180 temporary classrooms, and 8 office buildings in the school system. What percent of the buildings are office buildings?
5. There are 178 school buildings and 61 gymnasiums. What percent of the buildings have gyms?
6. There are 1,363 employees in the Department of Facilities. If 18% retire at the end of the year, how many people will retire?
7. There are 180 lawnmowers used by the grounds shop to maintain the grounds. 57 of them go into the shop this year. What percent of the lawnmowers do not go into the shop?
8. There are 574 floor buffing machines in use in the school system. 46% of them needed replacement belts last year. How many belts were installed on floor buffing machines?
9. If 23% of the 33,000 plumbing fixtures are repaired annually, how many fixtures are repaired?
10. There are 1,000 refrigeration units in the school system buildings. If Charlie in the motor shop works on 178 this year, what percent of the units will he work on this year?

CASAS Objective 1.1.3 - Interpret maps and graphs
CASAS Objective 1.2.4 - Compute unit pricing
CASAS Objective 1.7.3 - Interpret operating instructions, directions, or labels for consumer products
CASAS Objective 1.7.5 - Interpret directions to obtain repairs
CASAS Objective 6.1.1 - Add whole numbers
CASAS Objective 6.1.2 - Subtract whole numbers
CASAS Objective 6.1.4 - Divide whole numbers
CASAS Objective 6.2.1 - Add decimal fractions
CASAS Objective 6.2.2 - Subtract decimal fractions
CASAS Objective 6.2.3 - Multiply decimal fractions
CASAS Objective 6.2.4 - Divide decimal fractions
CASAS Objective 6.2.5 - Perform multiple operations using decimal fractions
CASAS Objective 6.2.6 - Convert decimal fractions to common fractions or percents
CASAS Objective 6.6.4 - Use measurements instruments
CASAS Objective 6.6.7 - Solve measurement problems in stipulated situations
CASAS Objective 6.9.2 - Estimate answers
CASAS Objective 6.5.2 - Recognize or evaluate simple geometric formulas

We are going to do some work in our classroom. To do this we need to take some measurement and make some decisions.

1. We are going to paint the walls. We need to know the total area of the walls we will paint. Use your tapes to measure the height and length of the walls. If you do not have your tape with you, how can we determine these distances?

2. Patrick, in the paint shop, will give us the paint. How many gallons will we need if each gallon covers 200 square feet? (Remember that we will need to put on two coats) How much would we have to pay for the paint at $12.00 a gallon if we had to buy it?

3. How long do you think it will take one person to do the painting? How long will it take if three people paint at the same time?

4. What do we have to do before we can paint the walls? How long do you estimate that the preparation will take?

5. We also need to put all new molding around the bottom of the walls. The Carpentry Shop will install the molding. How many feet of molding do they need?

6. The molding comes in eight foot strips. How many of these pieces will they need?

7. I want new floor tile. How many square feet of tile will we need to recover the floor? If the tile comes in boxes of 100, how many boxes will we need?

8. If the tile costs $25.98 a box, what is the total cost?

9. We need to weatherstrip around both the doors. How much weatherstripping do we need? Is one roll of 25 feet enough?

10. Our air conditioner can cool 7,200 cubic feet easily. Is this air conditioner big enough to cool our classroom, or do we need a new one?

11. I would like the Grounds Shop to build a flower bed outside by the stairs. It should be six feet long and two feet wide with a height of six inches. How much dirt will they have to bring in to fill it?

12. I want to plant an azalea bush every eight inches across the front. How many bushes can I plant?

13. These chalkboards are not in great shape. The Carpentry Shop will put in new ones for us. What size are our chalkboards? How high are they from the top of the board to the floor? How much molding do we need around them?

14. I changed my mind about the floor tile. I think that we should have carpet on these floors. How much carpeting do we need if we want wall-to-wall covering? If the carpeting costs $17.00 a square yard, what will the cost be? The Carpentry Shop will lay the new carpet. If it takes one man 8 hours to do the job, how long will it take three men?

15. After this classroom has been redecorated, I think we should have a party. How many donuts do we need if everyone were to get two? How many pies does Betty have to bake if each pie serves eight, and four people have seconds? How many gallons of punch do we need for everyone to get sixteen ounces and three people spill their first glasses and need refills? Do we want leftovers so we can send it to the lawnmower shop, or are you all on a diet?

CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles.
CASAS Objective 6.4.2 - Apply a percent in a context not involving money.
CASAS Objective 6.5.2 - Recognize or evaluate simple geometric formulas

Using the protrator, draw the following angles:

1.	50°	6.	170°
2.	40°	7.	38°
3.	30°	8.	75°
4.	180°	9.	5°
5.	90°	10.	88°

CASAS Objective 6.5.2 - Recognize or evaluate simple geometric formulas
CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.4 - Use measurement instruments
CASAS Objective 6.6.7 - Solve measurement problems in stipulated situations
CASAS Objective 6.6.8 - Interpret mechanical concepts or spatial relationships

Using the following directions, solve the problems on the following page.

1. Bisect Line AB

   To bisect line AB the compass is set on any radius greater than 1/2 of AB. Points A and B are used as centers and intersecting lines are drawn. The perpendicular bisecting line is drawn through these intersecting arcs.

2. Bisect arc AB

   The compass is set on any radius greater than 1/2 of AB. Points A and B are used as centers and intersecting arcs are drawn. The bisecting line is drawn through these intersecting arcs.

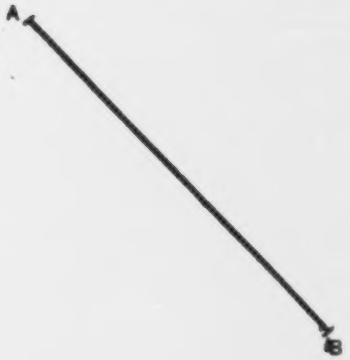
3. Bisect given angle ABC

   Draw an intersecting arc on lines AB and BC at points you can label D1 and D2. Use D1 and D2 as the new center points to draw the intersecting arcs that bisect angle ABC. Draw line BQ through the new point to point B to bisect the angle into 2 equal parts.

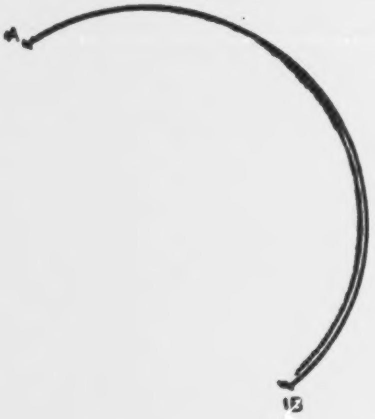
4. Transfer angle ABQ to a new position.

   Compass is set on the distance from point B to point D1 and draw an arc across line BA making point D1 on the new line. On original triangle place your compass at point D1 and any point on line BQ. On second triangle, keeping this radius place your compass point at D1 and draw an arc cutting the arc you have drawn. Draw a line from point B through new point.

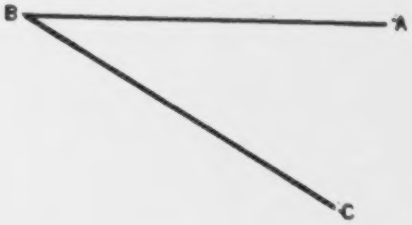
CONSTRUCTION SHEET



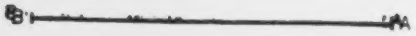
BISECT LINE AB.



BISECT ARC AB.



BISECT ANGLE ABC
WITH BQ.



TRANSFER ANGLE
ABQ, LINE AB GIVEN.

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GEOMETRIC CONSTRUCTION 7A

CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.4 - Use measurement instruments
CASAS Objective 6.6.7 - Solve measurement problems in stipulated situations
CASAS Objective 6.6.8 - Interpret mechanical concepts or spatial relationships
CASAS Objective 6.5.2 - Recognize or evaluate simple geometric formulas

1. Construct a triangle PBD with a base of 2 inches, one side of 1 1/2 inches and one side of 1 inch.

Step 1. With a ruler draw base line BD 2 inches long.
Step 2. Give your compass a radius of 1 1/2 inches. With the point at D, draw a short arc above the base line
Step 3. Give your compass a radius of 1 inch. With the point a B, draw a short arc intersecting P at the arc you have just drawn.
Step 4. Draw PD and PB

Δ BPD is the required triangle

2. Construct triangle GER, one angle of which is 35 degrees. The sides of that angle are 3/4 inch and 1 inch in length.

Step 1. With the ruler, draw base line ER one inch long.
Step 2. Using your protractor and making E the vertex, draw an angle of 35 degrees.
Step 3. Give the compass a radius of 3/4 inch. Place the compass point at E and mark off leg GE.
Step 4. Draw line GR.

Δ GER is the required triangle.

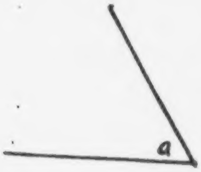
3. Construct triangle BEF if the base EF is 2 inches, angle BEF is 80 degrees and angle BFE is 30 degrees.

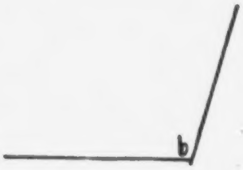
Step 1. With a ruler, draw the base line EF 2 inches long.
Step 2. With the protractor, construct an angle of 80 degrees(angle BEF) at vertex E.
Step 3. Construct an angle of 30 degrees (angle BFE) at vertex F.
Step 4. Extend the two legs until the intersect at B.

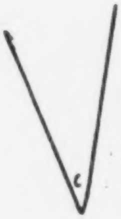
ΔBEF is the required triangle.

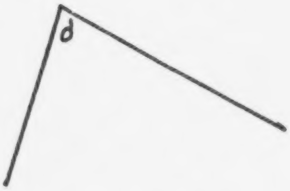
CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.4 - Use measurement instruments
CASAS Objective 6.5.2 - Recognize or evaluate simple geometric formulas

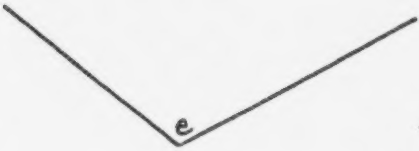
Find the number of degrees in each angle using a protractor.

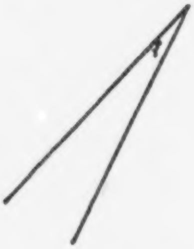


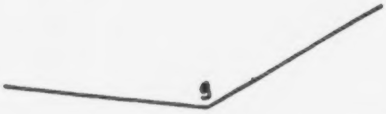


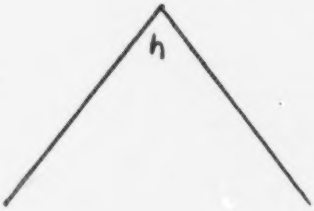


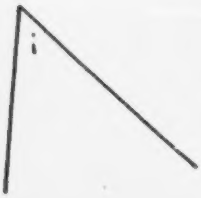


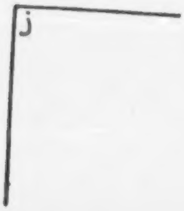


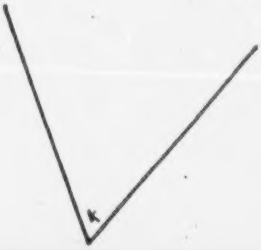












CASAS Objective 6.6.2 - Recognize,use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.4 - Use measurement instruments
CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

DIVIDING CIRCLES

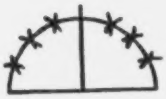
10.

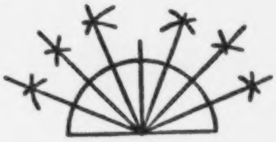
To divide a half circle into 8 equal parts:

a) Divide the half circle into 4 equal parts using either of the two methods just explained (bisecting or trial and error).

b) Use the same method to divide each section in half.

c) This results in 8 equal parts.

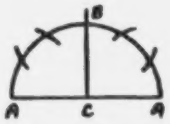




To divide a half circle into 6 equal parts:

a) Square a line upward from the center point to divide it into 2 equal parts.

b) Set the dividers equal to what you think is about 1/3 the dimension of the curve AB.



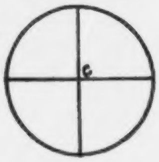
c) When testing a setting of the dividers, "walk off" the distances. Do not put marks on the metal because it usually takes several attempts before you get the correct setting. Set one point of the dividers on A and the other point along the edge of the circle. Swing the point that was on A around to step off the next section. Swing the other point around to see if it comes exactly to point B.

d) When you get the exact setting, scribe an arc at each point.

9.

To divide a circle into 4 equal parts (quarters):

a) Divide it in half, as before.
b) Square a line upward and downward from the center point. This divides the circle into 4 equal parts.



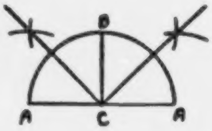
To divide a half circle into 4 equal parts:

a) Square a line upward from the center point to divide it into 2 equal parts.

b) Set the dividers at a convenient distance that is greater than 1/2 of distance A-B.

c) Use points A and B as centers to scribe arcs.

d) Draw a straight line from the center of the half circle through the point where the arcs cross.

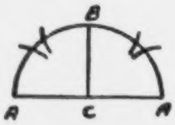


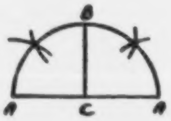
To divide a half circle into 4 equal parts by trial and error:

a) Square a line upward from the center point do divide it into 2 equal parts.

b) Set the dividers equal to what you think is 1/2 the dimension of the curve AB.

c) Use A as the center and scribe an arc across the circle. Use B as the center and scribe an arc across the circle. If the 2 arcs do not meet, readjust the dividers and try again. Usually they do not meet on the first and second attempts. When they meet, this point is the center to divide the half circle into 4 equal parts.





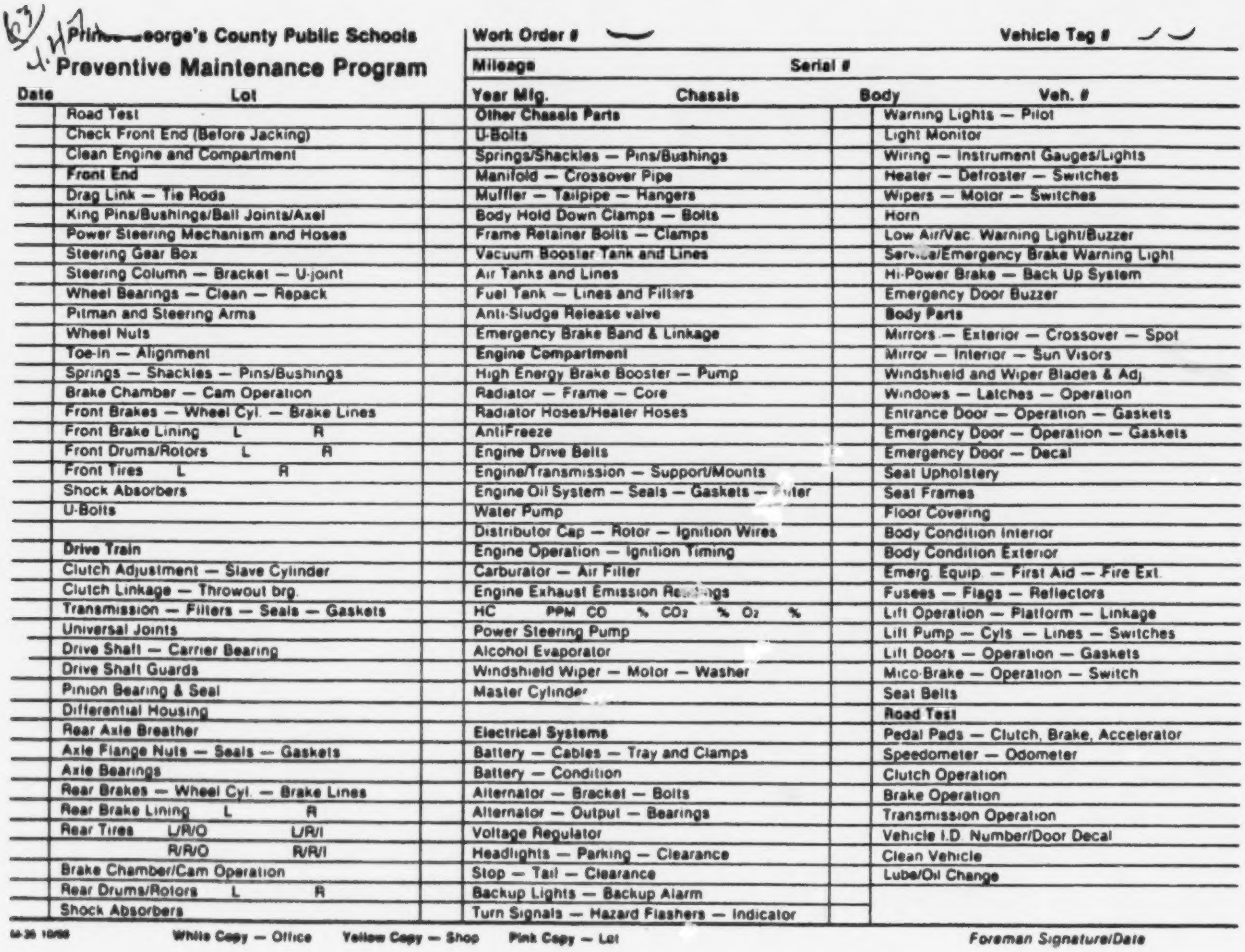
CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions
CASAS Objective 1.9.6 - Interpret information related to automobile maintenance

Match the parts to be checked with the section it is under on the Preventive Maintenance Program form (page 4.18).

Front End	Electrical Systems
Drive Train	Body Parts
Other Chassis Parts	Road Test

1. Engine Operation - Ignition Timing ____________________.
2. Emergency Door Buzzer ____________________.
3. Rear Brake Lining ____________________.
4. Wheel Nuts ____________________.
5. Water Pump ____________________.
6. Brake Operation ____________________.
7. Horn ____________________.
8. Floor Covering ____________________.
9. Light Monitor ____________________.
10. Manifold-Crossover Pipe ____________________.
11. U-Bolts ____________________.
12. Differential Housing ____________________.
13. Power Steering Pump ____________________.
14. Antifreeze ____________________.

AUTO MAINTENANCE FORM



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Prince George's County Public Schools

Preventive Maintenance Program

Work Order # **Vehicle Tag #**

Mileage **Serial #**

Year Mfg. **Chassis** **Body** **Veh. #**

Date **Lot**

Road Test
Check Front End (Before Jacking)
Clean Engine and Compartment
Front End
Drag Link — Tie Rods
King Pins/Bushings/Ball Joints/Axel
Power Steering Mechanism and Hoses
Steering Gear Box
Steering Column — Bracket — U-joint
Wheel Bearings — Clean — Repack
Pitman and Steering Arms
Wheel Nuts
Toe-in — Alignment
Springs — Shackles — Pins/Bushings
Brake Chamber — Cam Operation
Front Brakes — Wheel Cyl. — Brake Lines
Front Brake Lining L R
Front Drums/Rotors L R
Front Tires L R
Shock Absorbers
U-Bolts

Drive Train
Clutch Adjustment — Slave Cylinder
Clutch Linkage — Throwout brg.
Transmission — Filters — Seals — Gaskets
Universal Joints
Drive Shaft — Carrier Bearing
Drive Shaft Guards
Pinion Bearing & Seal
Differential Housing
Rear Axle Breather
Axle Flange Nuts — Seals — Gaskets
Axle Bearings
Rear Brakes — Wheel Cyl. — Brake Lines
Rear Brake Lining L R
Rear Tires L/R/O L/R/I
R/R/O R/R/I
Brake Chamber/Cam Operation
Rear Drums/Rotors L R
Shock Absorbers

Other Chassis Parts
U-Bolts
Springs/Shackles — Pins/Bushings
Manifold — Crossover Pipe
Muffler — Tailpipe — Hangers
Body Hold Down Clamps — Bolts
Frame Retainer Bolts — Clamps
Vacuum Booster Tank and Lines
Air Tanks and Lines
Fuel Tank — Lines and Filters
Anti-Sludge Release valve
Emergency Brake Band & Linkage
Engine Compartment
High Energy Brake Booster — Pump
Radiator — Frame — Core
Radiator Hoses/Heater Hoses
AntiFreeze
Engine Drive Belts
Engine/Transmission — Support/Mounts
Engine Oil System — Seals — Gaskets — Filter
Water Pump
Distributor Cap — Rotor — Ignition Wires
Engine Operation — Ignition Timing
Carburator — Air Filter
Engine Exhaust Emission Readings
HC PPM CO % CO_2 % O_2 %
Power Steering Pump
Alcohol Evaporator
Windshield Wiper — Motor — Washer
Master Cylinder

Electrical Systems
Battery — Cables — Tray and Clamps
Battery — Condition
Alternator — Bracket — Bolts
Alternator — Output — Bearings
Voltage Regulator
Headlights — Parking — Clearance
Stop — Tail — Clearance
Backup Lights — Backup Alarm
Turn Signals — Hazard Flashers — Indicator

Warning Lights — Pilot
Light Monitor
Wiring — Instrument Gauges/Lights
Heater — Defroster — Switches
Wipers — Motor — Switches
Horn
Low Air/Vac. Warning Light/Buzzer
Service/Emergency Brake Warning Light
Hi-Power Brake — Back Up System
Emergency Door Buzzer
Body Parts
Mirrors — Exterior — Crossover — Spot
Mirror — Interior — Sun Visors
Windshield and Wiper Blades & Adj
Windows — Latches — Operation
Entrance Door — Operation — Gaskets
Emergency Door — Operation — Gaskets
Emergency Door — Decal
Seat Upholstery
Seat Frames
Floor Covering
Body Condition Interior
Body Condition Exterior
Emerg. Equip. — First Aid — Fire Ext.
Fusees — Flags — Reflectors
Lift Operation — Platform — Linkage
Lift Pump — Cyls — Lines — Switches
Lift Doors — Operation — Gaskets
Mico-Brake — Operation — Switch
Seat Belts
Road Test
Pedal Pads — Clutch, Brake, Accelerator
Speedometer — Odometer
Clutch Operation
Brake Operation
Transmission Operation
Vehicle I.D. Number/Door Decal
Clean Vehicle
Lube/Oil Change

M-36 10/88 **White Copy — Office** **Yellow Copy — Shop** **Pink Copy — Lot** *Foreman Signature/Date*

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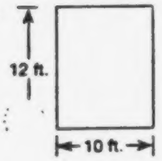
CASAS Objective 6.6.3 - Measure area and volume of geometric shapes
CASAS Objective 6.6.4 - Use measurement instruments
CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.1 - Convert U.S. Standard and International Metric System of Measurement
CASAS Objective 6.4 - Compute with percents, rate, ratio, or proportion
CASAS Objective 6.5.2 - Recognize or evaluate simple geometric formulas
CASAS Objective 6.1.4 - Divide whole numbers
CASAS Objective 6.1.3 - Multiply whole numbers
CASAS Objective 6.1.5 - Perform multiple operations using whole numbers

TILING A ROOM

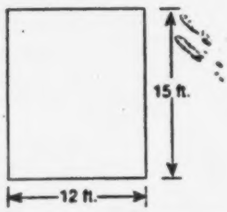
Tiling a room is a home-improvement project that many people do themselves. No professional skills are needed, and tiles can be laid in a short time. Particularly easy to use are self-stick vinyl tiles that can be laid over old tile or old linoleum. Self-stick vinyl tiles cost about $1.00 per square foot.

Suppose you want to tile two rooms in your house: the spare bedroom and the family room. Sketches of these rooms are shown below.

Spare Bedroom



Family Room



▼ Practice

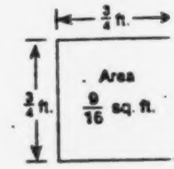
Use the sketches to help you answer the questions.

1. Determine the cost of tiling the spare bedroom by answering the following questions.
   a) What is the area of floor to be tiled?____________
   b) If you use tiles that are each 1 square foot in area, how many tiles will you need?____________
   c) If you choose a tile that costs $1.09 per square foot, how much will you spend on tiles?____________
2. Determine the cost of tiling the family room by answering these questions.
   a) What is the area of floor to be tiled?____________
   b) For this room you have chosen a tile that measures 9" by 9". How many tiles will you need?____________
   Hint: Since 9" = $\frac{3}{4}$ ft., each tile has an area of $\frac{3}{4} \times \frac{3}{4} = \frac{9}{16}$ sq. ft.
   c) If you pay $.98 for each tile, how much will it cost you to tile the family room?________

▼ MATH TIP

To determine how many tiles are needed, divide the area of the floor to be tiled by the area of a single piece of tile being used.

9 in. = $\frac{3}{4}$ ft.



CASAS Objective 6.6.3 - Measure area and volume of geometric shapes
CASAS Objective 6.6.4 - Use measurement instruments
CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.1 - Convert U.S. Standard and International Metric System of Measurement
CASAS Objective 6.4 - Compute with percents, rate, ratio, or proportion
CASAS Objective 6.5.2 - Recognize or evaluate simple geometric formulas
CASAS Objective 6.1.4 - Divide whole numbers
CASAS Objective 6.1.3 - Multiply whole numbers
CASAS Objective 6.1.5 - Perform multiple operations using whole numbers

Using guidelines on page 4.19, solve the following problems.

1. We are going to retile our classroom. How many square feet of tile do we need?
2. I want the same size tiles that are down now, only in a brighter color. How many tiles do we need?
3. If they come in boxes of 100, how many boxes do we need?
4. We are going to retile Betty's office, too. How much tile do we need? How many boxes?
5. If Robert can tile 10 square feet in an hour, how many hours will it take him to do the classroom? Betty's Office?

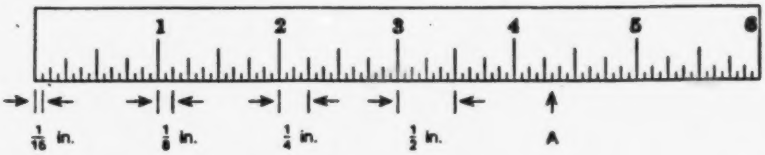
CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.4 - Use measurement instruments
CASAS Objective 6.6.7 - Solve measurement problems in stipulated situations

MEASURE W/ ENGLISH RULER

Probably the most commonly used measuring tool found around most homes is the ruler. Pictured below is the familiar 6-inch English ruler.

- **Each inch is divided into . . .**

sixteenth inches (from one line to the next)
eighth inches (every 2 lines) $\frac{1"}{8} = \frac{2"}{16}$
quarter inches (every 4 lines) $\frac{1"}{4} = \frac{4"}{16}$
half inches (every 8 lines) $\frac{1"}{2} = \frac{8"}{16}$



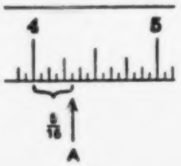
You read a ruler from left to right. To make reading easier, each fraction of an inch is represented by a line of different height.

- **When measuring, always reduce fraction answers when possible.**

Example: **How far is point A from the left end of the ruler?**

First notice that point A is between 4 and 5 inches from the left end.

Because point A is at a $\frac{1}{16}$-inch line, count the number of sixteenths that point A is beyond 4. Point A is 5 sixteenths to the right of the 4.

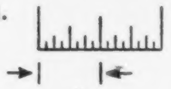


Answer: $4\frac{5}{16}$ inches

▼ Practice

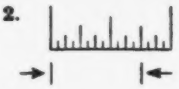
What distance is represented in each ruler pictured below? Reduce fraction answers.

1.



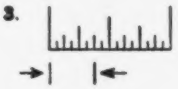
____ inch

2.



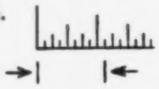
____ inch

3.



____ inch

4.



____ inch

▸ 144

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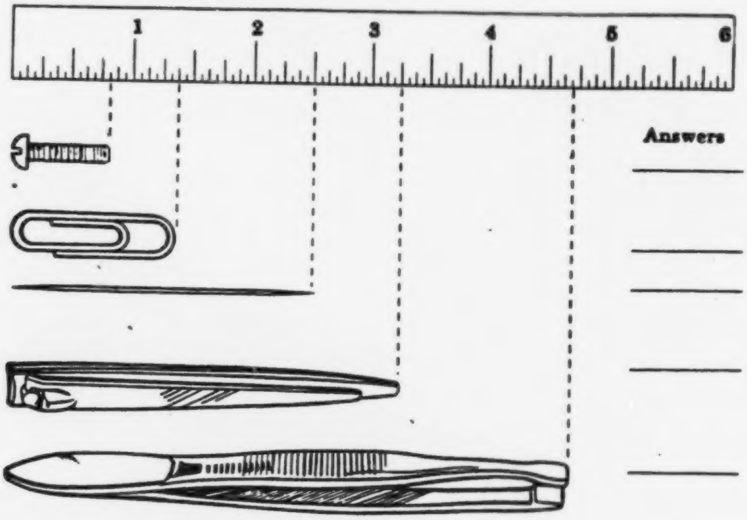
CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.4 - Use measurement instruments
CASAS Objective 6.6.7 - Solve measurement problems in stipulated situations

PRACTICE

What is the length of each object pictured below? Reduce the fraction part of each answer to lowest terms.



Answers

5. ______

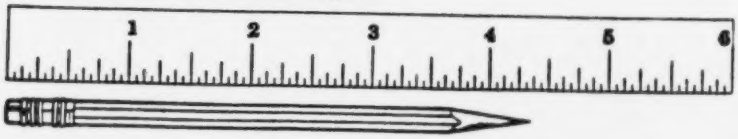
6. ______

7. ______

8. ______

9. ______

Problems 10–12 refer to the pencil pictured below. Choose each answer from the choices given.



10. What is the length of the pencil to the nearest $\frac{1}{16}$ inch?
- a) $4\frac{3}{8}$"
- b) $4\frac{7}{16}$"
- c) $4\frac{1}{2}$"

11. What is the length of the pencil to the nearest $\frac{1}{8}$ inch?
- a) $4\frac{1}{4}$"
- b) $4\frac{3}{8}$"
- c) $4\frac{1}{2}$"

12. What is the length of the pencil to the nearest $\frac{1}{4}$ inch?
- a) $4\frac{1}{4}$"
- b) $4\frac{1}{2}$"
- c) $4\frac{3}{4}$"

CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.4 - Use measurement instruments
CASAS Objective 6.6.7 - Solve measurement problems in stipulated situations

Answer the following questions.

1. Measure the width of the top of your desk. How wide is it?
2. Measure the length and width of Leroy's desk. How wide is it? How long is it?
3. Measure all the way around one of the windows by the door. How many inches around all four sides? How many feet? How much framing would we need to frame all 4 windows?
4. Measure the length of Anthony's foot. How long is it? Measure Dunell's foot. How long is it? How much longer is Anthony's foot than Dunell's?
5. How wide are the steps outside? How deep are they?
6. Measure the length of your pencil.
7. How wide is the framing around the chalkboard?
8. Measure your arm from your elbow to your wrist.
9. What size are the floor tiles in this room?
10. What is the length of the lawnmower outside? How many will fit end to end on the trailer?

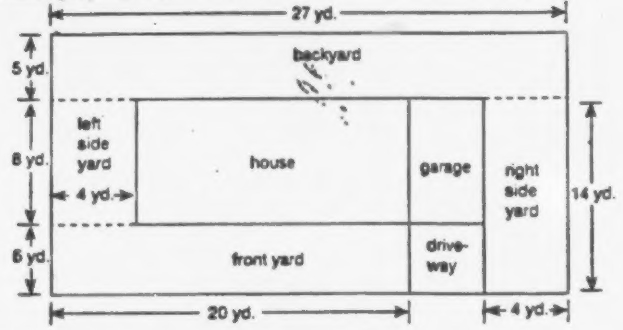
CASAS Objective 6.6.3 - Measure area and volume of geometric shapes
CASAS Objective 6.6.8 - Interpret mechanical concepts or spatial relationships

BUYING SOIL

Lin Li is going to put a lawn around her house. To do this, she must put a 4-inch layer of topsoil on the dirt that is there now.

Lin learns that soil is sold by the cubic yard. Before she orders, she must estimate the total number of cubic yards of topsoil she needs.

A sketch of Lin's property is shown below.



Example: To compute how much topsoil she needs for the left side yard, Lin multiplies as follows:

left side yard = length × width × depth

$= 8 \text{ yd.} \times 4 \text{ yd.} \times \frac{1}{9} \text{ yd.}$ (since 4 in. = $\frac{4}{36}$ yd. = $\frac{1}{9}$ yd.)

$= \frac{8}{1} \times \frac{4}{1} \times \frac{1}{9} = \frac{32}{9}$

$= 3\frac{5}{9}$

Answer: She needs $3\frac{5}{9}$ cubic yards.

▼ Practice

Use the sketch to help you answer the questions.

1. Complete the list at right started by Lin to determine the total amount of topsoil she needs to order.
2. If she pays $9 per cubic yard of topsoil (including delivery), how much will Lin pay for the topsoil she needs?__________

	Volume of Soil Needed
left side yard	$3\frac{5}{9}$
right side yard	______
front yard	______
backyard	______
TOTAL:	______

CASAS Objective 6.6.3 - Measure area and volume of geometric shapes
CASAS Objective 6.6.8 - Interpret mechanical concepts or spatial relationships

Solve the following problems.

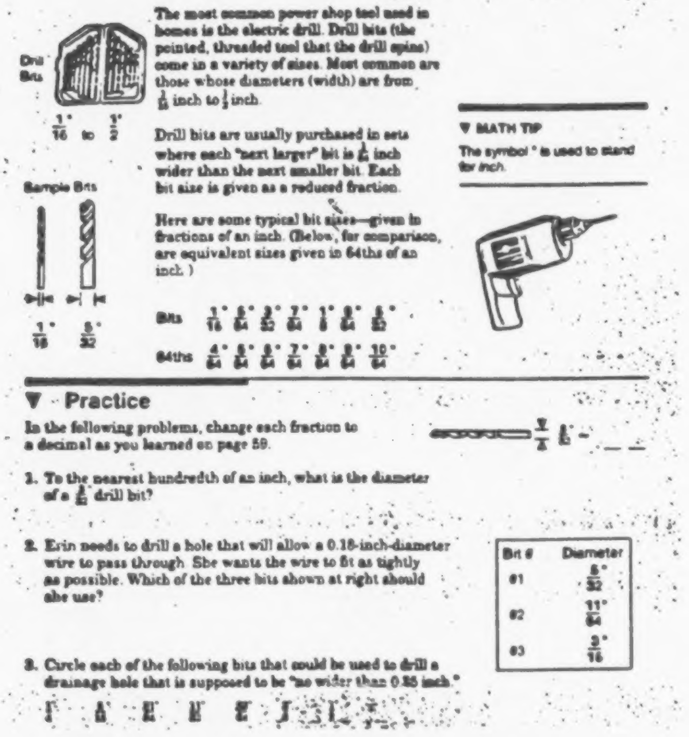
1. The grounds shop is going to put a flower bed in the front of this building. It is going to be 8 feet long, 2 feet deep and 8" high. How much soil will have to be brought in to fill it 6" deep?

2. They will put 2" of mulch on top of the soil. How much mulch will they need?

3. What is the total amount of soil and mulch?

CASAS Objective 6.6.0 - Identify the correct picture or appropriate response from oral cues
CASAS Objective 6.6.1 - Convert U.S. Standard and International Metric System of Measurement
CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.7 - Solve measurement problems in stipulated situations
CASAS Objective 6.6.8 - Interpret mechanical concepts or spatial relationships
CASAS Objective 6.3.1 - Add common or mixed fractions
CASAS Objective 6.3.2 - Subtract common or mixed fractions
CASAS Objective 6.3.5 - Perform multiple operations using common or mixed fractions
CASAS Objective 6.3.6 - Convert common or mixed fractions to decimal fractions or percents
CASAS Objective 6.2.6 - Convert decimal fractions to common fractions or percents

WORKING WITH DRILL BITS



Drill Bits

$\frac{1}{16}$" to $\frac{1}{2}$"

The most common power shop tool used in homes is the electric drill. Drill bits (the pointed, threaded tool that the drill spins) come in a variety of sizes. Most common are those whose diameters (width) are from $\frac{1}{16}$ inch to $\frac{1}{2}$ inch.

Drill bits are usually purchased in sets where each "next larger" bit is $\frac{1}{64}$ inch wider than the next smaller bit. Each bit size is given as a reduced fraction.

Here are some typical bit sizes—given in fractions of an inch. (Below, for comparison, are equivalent sizes given in 64ths of an inch.)

Sample Bits

$\frac{1}{16}$"　$\frac{5}{32}$"

Bits	$\frac{1}{16}$"	$\frac{5}{64}$"	$\frac{3}{32}$"	$\frac{7}{64}$"	$\frac{1}{8}$"	$\frac{9}{64}$"	$\frac{5}{32}$"
64ths	$\frac{4}{64}$"	$\frac{5}{64}$"	$\frac{6}{64}$"	$\frac{7}{64}$"	$\frac{8}{64}$"	$\frac{9}{64}$"	$\frac{10}{64}$"

▼ MATH TIP

The symbol " is used to stand for *inch.*

▼ Practice

In the following problems, change each fraction to a decimal as you learned on page 59.

1. To the nearest hundredth of an inch, what is the diameter of a [illegible]" drill bit?

2. Erin needs to drill a hole that will allow a 0.18-inch-diameter wire to pass through. She wants the wire to fit as tightly as possible. Which of the three bits shown at right should she use?

Bit #	Diameter
#1	$\frac{5}{32}$"
#2	$\frac{11}{64}$"
#3	$\frac{3}{16}$"

3. Circle each of the following bits that could be used to drill a drainage hole that is supposed to be "no wider than 0.85 inch."

[illegible]

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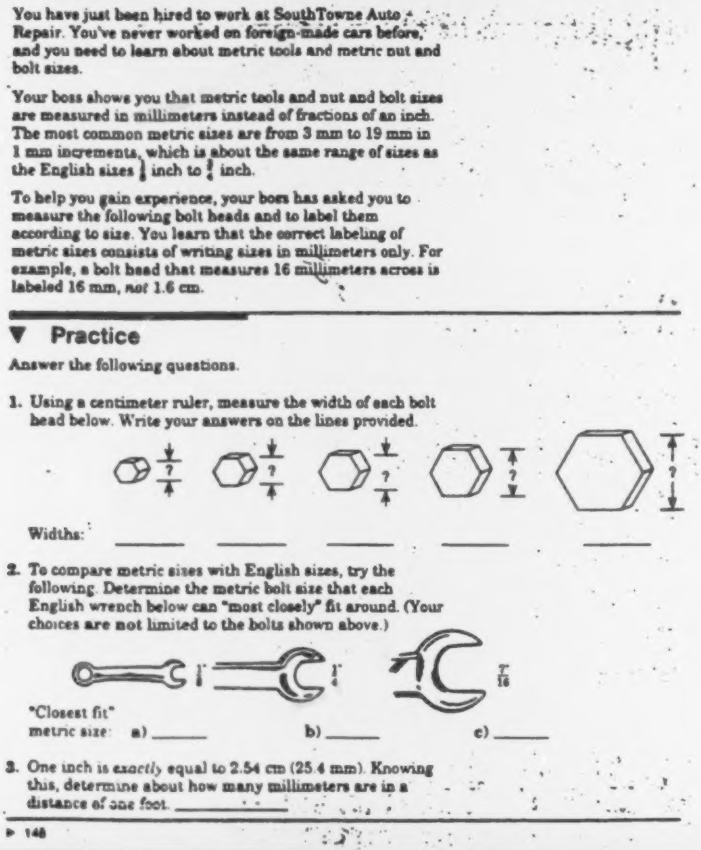
CASAS Objective 6.6.0 - **Identify the correct picture or appropriate response from oral cues**
CASAS Objective 6.6.1 - **Convert U.S. Standard and International Metric System of Measurement**
CASAS Objective 6.6.2 - **Recognize, use, and measure linear dimensions, geometric shapes, or angles**
CASAS Objective 6.6.7 - **Solve measurement problems in stipulated situations**
CASAS Objective 6.6.8 - **Interpret mechanical concepts or spatial relationships**
CASAS Objective 6.3.1 - **Add common or mixed fractions**
CASAS Objective 6.3.2 - **Subtract common or mixed fractions**
CASAS Objective 6.3.5 - **Perform multiple operations using common or mixed fractions**
CASAS Objective 6.3.6 - **Convert common or mixed fractions to decimal fractions or percents**
CASAS Objective 6.2.6 - **Convert decimal fractions to common fractions or percents**

WORKING WITH METRIC TOOLS



You have just been hired to work at SouthTowne Auto Repair. You've never worked on foreign-made cars before, and you need to learn about metric tools and metric nut and bolt sizes.

Your boss shows you that metric tools and nut and bolt sizes are measured in millimeters instead of fractions of an inch. The most common metric sizes are from 3 mm to 19 mm in 1 mm increments, which is about the same range of sizes as the English sizes $\frac{1}{8}$ inch to $\frac{3}{4}$ inch.

To help you gain experience, your boss has asked you to measure the following bolt heads and to label them according to size. You learn that the correct labeling of metric sizes consists of writing sizes in millimeters only. For example, a bolt head that measures 16 millimeters across is labeled 16 mm, *not* 1.6 cm.

▼ Practice

Answer the following questions.

1. Using a centimeter ruler, measure the width of each bolt head below. Write your answers on the lines provided.

Widths: ______ ______ ______ ______ ______

2. To compare metric sizes with English sizes, try the following. Determine the metric bolt size that each English wrench below can "most closely" fit around. (Your choices are not limited to the bolts shown above.)

"Closest fit"
metric size: a) ______ b) ______ c) ______

3. One inch is *exactly* equal to 2.54 cm (25.4 mm). Knowing this, determine about how many millimeters are in a distance of one foot. ____________

CASAS Objective 6.6.0 - Identify the correct picture or appropriate response from oral cues
CASAS Objective 6.6.1 - Convert U.S. Standard and International Metric System of Measurement
CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
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CASAS Objective 6.3.5 - Perform multiple operations using common or mixed fractions
CASAS Objective 6.3.6 - Convert common or mixed fractions to decimal fractions or percents
CASAS Objective 6.2.6 - Convert decimal fractions to common fractions or percents

Answer the following questions.

1. Do you have metric tools in your shop?

2. Do you use a chart to figure out what hardware you can use?

3. We are going to try it without the charts. What size wrench will we need to take out the bolts in the doors?

4. What size bolts would I use if I drilled holes with a 7/64" drill bit?

5. What size bolts did Charlie use on the motor display board? (Use your metric ruler) - What size drill bit did he use to drill the holes?

6. What size bolts are holding up the air conditioner? What size drill bit was used to drill the holes?

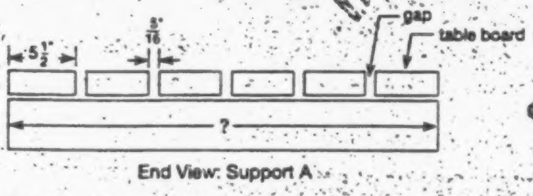
CASAS Objective 6.6.3 - Measure area and volume of geometric shapes
CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.4 - Use measurement instruments
CASAS Objective 6.6.5 - Interpret scale drawings
CASAS Objective 6.5.2 - Recognize or evaluate simple geometric formulas
CASAS Objective 6.3.2 - Subtract common or mixed fractions
CASAS Objective 6.3.1 - Add common or mixed fractions
CASAS Objective 6.3.3 - Multiply common or mixed fractions

USING MEASUREMENT IN HOME PROJECTS

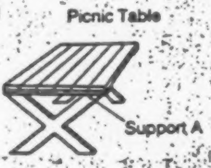
Home projects are an important part of Bonnie Reed's life. She loves to build things and fix up her house in her spare time. Two of the projects she did last month are described below. Use your math skills to answer the questions that Bonnie faced during each project.

Project #1 Building a Picnic Table

Bonnie built the picnic table shown below. Before nailing it together, Bonnie needed to compute the length of support A.



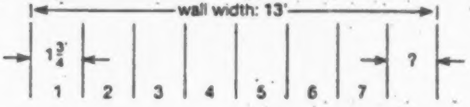
End View: Support A



What is the length of support A?__________
Hint: Length equals 6 table boards plus 5 gaps.

Project #2 Wallpapering Her Bedroom

Bonnie used 7 full strips of wallpaper to paper the wall in her bedroom. Seven full strips didn't quite complete the job, and she needed another partial strip.



▼ MATH TIP

The symbol ' is used to stand for feet.

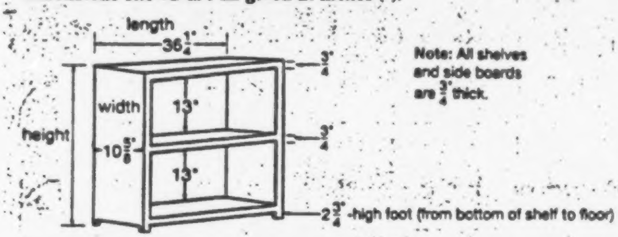
How wide is the partial strip that Bonnie needs?__________

CASAS Objective 6.6.3 - Measure area and volume of geometric shapes
CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.4 - Use measurement instruments
CASAS Objective 6.6.5 - Interpret scale drawings
CASAS Objective 6.5.2 - Recognize or evaluate simple geometric formulas
CASAS Objective 6.3.2 - Subtract common or mixed fractions
CASAS Objective 6.3.1 - Add common or mixed fractions
CASAS Objective 6.3.3 - Multiply common or mixed fractions

WORKING WITH DIMENSIONS

Fractions and mixed numbers show up in many do-it-yourself projects around the home. Usually, they appear as dimensions—numbers that give the length, width (or depth), height, and other important distances that may describe an object. Questions often arise that involve adding or subtracting two or more of these dimensions.

Suppose you are building the bookcase pictured below. The dimensions shown are all given in inches (").


length
$36\frac{1}{4}"$
width
$10\frac{5}{8}"$
height
13"
13"
$\frac{3}{4}"$
$\frac{3}{4}"$
Note: All shelves and side boards are $\frac{3}{4}"$ thick.
$2\frac{3}{4}"$-high foot (from bottom of shelf to floor)

▼ Practice

Use the diagram to help you answer the following questions.

1. What is the total height of the bookcase?________
(Height = foot height + two 13" spaces + three $\frac{3}{4}"$ shelf thicknesses.)
2. How much longer is the bookcase than it is high?________
3. How long is the middle shelf?________
(Middle shelf length = bookcase length - two side board thicknesses.)
4. If you place a $7\frac{9}{16}"$ ceramic statue on the middle shelf, how much room will be above the statue?________
5. You designed the bookcase so that the height of the middle shelf is adjustable. Suppose you raise the middle shelf $\frac{7}{8}"$ higher than it is now. How much room will now be
   - a) *between* the lower and middle shelves?________
   - b) *above* the middle shelf?________
6. If you place the bookcase so that its back surface is $\frac{5}{8}"$ from the wall, how far from the wall will the front edge be?________

CASAS Objective 6.6.3 - Measure area and volume of geometric shapes
CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.4 - Use measurement instruments
CASAS Objective 6.6.5 - Interpret scale drawings
CASAS Objective 6.5.2 - Recognize or evaluate simple geometric formulas
CASAS Objective 6.3.2 - Subtract common or mixed fractions
CASAS Objective 6.3.1 - Add common or mixed fractions
CASAS Objective 6.3.3 - Multiply common or mixed fractions

Answer the following questions.

1. We are going to wallpaper Pernell's office (the back wall only). If we use the same size wallpaper Bonnie used, how many strips will we need? How wide will the last strip be?
2. I want you to build a picnic table outside of the classroom so we can have somewhere to sit on break. I want it 2 times as wide as Bonnie's table. How long will the support be?
3. We are going to build three of these bookcases. If the boards came in 3' lengths, how many do we need?
4. I want to stand the big GED book upright on the top shelf. How much room do we need?
5. Will these bookcases fit under the chalkboard?

CASAS Objective 6.2.2 - Subtract decimal fractions
CASAS Objective 6.2.4 - Divide decimal fractions
CASAS Objective 1.9.3 - Compute mileage and gasoline consumption

FIGURING GAS MILEAGE

Gas mileage tells the number of miles a car can drive on one gallon of gas. When a car engine is tuned up, it gets higher gas mileage than when it needs to be tuned.

Brett Lance keeps a record of his car's gas mileage. He does this by recording the reading on the odometer (mileage indicator) each time he buys gas. He also records the number of gallons that he buys to refill the tank.

- By subtracting the previous odometer reading from the present reading, Brett determines the number of miles driven.
- The amount of gas used is equal to the number of gallons it now takes to refill the tank.

Example: Here's how Brett figured his gas mileage for the week of October 3:

Present odometer reading	68,972.8
Previous odometer reading	− 68,734.9
Miles driven	237.9

$$\text{Gas Mileage} = \frac{\text{Miles Driven}}{\text{Gallons Used}} = \frac{237.9}{9.4}$$

= **25.3 miles per gallon**
(rounded to nearest tenth mile per gallon)

$$\begin{array}{r} 25.30 \\ 9.4\overline{)237.900} \\ -188 \\ \hline 499 \\ -470 \\ \hline 290 \\ -282 \\ \hline 80 \end{array}$$

▼ Practice

1. Determine the gas mileage of Brett's car during each of the weeks shown on the table below:

Date	Odometer Reading	Gallons	Gas Mileage (nearest tenth)
9/26	68,734.9	8.65	24.9
10/3	68,972.8	9.4	25.3
10/10	69,272.8	11.95	______
10/17	69,492.2	12.9	______
10/24	69,674.0	10	______

2. Brett's mechanic discovered that a spark plug was broken in the engine of Brett's car. During which week did this plug most likely break? What is the clue? ______________

CASAS Objective 6.2.2 - Subtract decimal fractions
CASAS Objective 6.2.4 - Divide decimal fractions
CASAS Objective 1.9.3 - Compute mileage and gasoline consumption

My husband makes us keep mileage records in our cars. Each time we buy gas we record the mileage and how much gas we bought. We save ourselves some work by using the trip meters on the cars, so the subtraction is done for us.

1. The next time you fill your vehicle with gas, record your mileage at that time on a piece of paper (including the tenths).

2. The second time you fill your vehicle for this assignment, record your mileage to that point, and write down how much gas you bought, including the tenths.

3. Bring the two mileage numbers and the amount of gas you purchased to class.

4. Subtract your two mileage numbers.

5. Divide the answer from number 4 by the amount of gas you purchased. Your answer is how many miles per gallon you are getting in your vehicle.

CASAS Objective 4.4.3 - **Recognize and use occupational signs, charts, forms, and written directions**

CASAS Objective 4.4.5 - **Interpret tasks related to clarifying, giving or providing feedback to instructions; and reacting to criticism**

CASAS Objective 4.4.1 - **Identify appropriate behavior, attitudes, and social interaction for keeping a job and getting a promotion**

QUARTERLY PERFORMANCE APPRAISAL

NAME Last First Initial		
Shop/Crew Quarter/Year		
Please read the Bases for Performance Appraisal (on back) before completing this form. Check in the appropriate box the level of performance with respect to each of the following factors which are applicable to the work of this employee.	SATISFACTORY (Meets or exceeds performance standards)	UNSATISFACTORY (Below acceptable performance standards)
1. Quality of Work		
2. Quantity of Work		
3. Work Habits		
4. Work Attitudes		
5. Relationship with Others		
6. Personal Qualities		
7. Supervisory Ability (if applicable)		

Comments: Ratings of "Unsatisfactory" must be explained by a statement of facts supporting said rating. Suggestions to aid employee in improving performance MUST be made. Comments relative special commendation should be made also.

Signature of Rater Title Date

Signature of Reviewer Title Date

This appraisal has been discussed with me. My signature does not indicate I agree with all ratings.

Signature of Employee Date

DISTRIBUTION: Original to Plant Maintenance Personnel File. Copy to Employee

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions
CASAS Objective 4.4.5 - Interpret tasks related to clarifying, giving or providing feedback to instructions; and reacting to criticism
CASAS Objective 4.4.1 - Identify appropriate behavior, attitudes, and social interaction for keeping a job and getting a promotion

BASES FOR PERFORMANCE APPRAISAL

1. Quality of Work
   a. Demonstrates satisfactory knowledge of the job.
   b. Performs work with acceptable accuracy.
   c. Work is neat and presentable.
   d. Is thorough in the work done.
2. Quantity of Work
   a. Completes an acceptable amount of work on time.
   b. Does extra work when asked.
3. Work Habits
   a. Is regular in attendance at work.
   b. Observes established working hours.
   c. Carries out tasks in an orderly and diligent manner.
   d. Demonstrates the ability to work without immediate supervision.
   e. Complies with instructions, rules and regulations, including health and safety precautions.
4. Work Attitudes
   a. Endeavors to improve work techniques.
   b. Accepts new ideas and procedures.
   c. Accepts criticism and suggestions.
   d. Accepts responsibility willingly.
   e. Demonstrates interest in work.
5. Relationship with Others
   a. Gains the respect of co-workers.
   b. Helps others cheerfully.
   c. Cooperates with supervisors and fellow workers.
   d. Understands and respects pupils, teachers and other adults.
   e. Observes established channels of communication.
6. Personal Qualities
   a. Acts with good judgement.
   b. Demonstrates initiative and drive.
   c. Is adaptable to emergencies and new situations.
   d. Is physically fit, appears healthy and energetic.
   e. Is careful of appearance; dress and grooming are appropriate.
   f. Possesses a good sense of humor.
   g. Demonstrates loyalty to organization and co-workers.
7. Supervisory Ability
   a. Demonstrates effective leadership.
   b. Is fair and impartial in relationships with subordinates.
   c. Makes good and timely decisions.
   d. Trains and instructs subordinates effectively.
   e. Plans, schedules and makes assignments successfully.
   f. Evaluates performance of subordinates effectively.
   g. Maintains a high degree of discipline among employees.

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CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions
CASAS Objective 4.4.5 - Interpret tasks related to clarifying, giving or providing feedback to instructions; and reacting to criticism
CASAS Objective 4.4.1 - Identify appropriate behavior, attitudes, and social interaction for keeping a job and getting a promotion

This is a copy of your Quarterly Performance Appraisal form. We are going to use it and the information on page 4.35 to think about ourselves and how we do our jobs.

Use a pencil to mark items 1-7 the way you would rate yourself.

Use a pen to mark the items 1-7 the way you think your supervisor will rate you.

For the items you yourself marked unsatisfactory (if any), tell how you can improve your ratings. (Use the back of the sheet to help you think of things.)

For the items you think your supervisor would mark unsatisfactory (if any), tell what you could do to change his/her mind on your next evaluation.

What are the two thing that determine your evaluation for quality of work?

7 1/4- INCH RING GEAR

- Fit of the side gear on the axle shafts.
- Differential case for cracks and scoring.
- Replace all worn parts.

PINION AND RING GEAR

Inspect

- Pinion and ring gear teeth for cracking, chipping, scoring, or excessive wear.
- Pinion splines for wear.
- Pinion flange splines for wear.
- Fit of the pinion on the pinion flange.
- Sealing surface of the pinion flange for nicks, burrs, or rough tool marks which would cause damage to the seals' inside diameter and result in an oil leak.
- Replace all worn or broken parts.
- Ring and pinion gears are matched sets and are both replaced any time a replacement of either is necessary.

BEARINGS

Inspect

- Bearings visually and by feel. The bearings should feel smooth when oiled and rotated while applying as much hand pressure as possible.
- The large end of the bearing rollers for wear. This is where tapered roller bearing wear is most evident.
- Bearing cups for wear, cracks, brinelling and scoring.
- Bearings and cups are only replaced as sets.
- If the front axle was operated for an extended period of time with very loose bearings, the ring gear and drive pinion will also require replacement.
- Low mileage bearings may have minute scratches and pits on the rollers and the bearing cups from the initial preload. Do not replace a bearing for this reason.
- Bearing caps for cracks or chips.

THRUST WASHERS, SHIMS AND ADJUSTER SLEEVES

Inspect

- Shims and thrust washers for cracks and chips. Damaged shims should be replaced with an equally sized service shim.
- Adjuster sleeves for damaged threads. Replace if required.

SHIFT MECHANISM

Inspect (Figures 1 and 2)

- Carrier connector (9) for damaged splines and teeth. Replace as required.
- Shift fork (17) for wear, scoring, and damage to thrust surfaces. Replace if needed.
- Sleeve (22) and inner output shaft (23) for damaged splines and teeth. Replace if necessary.
- Spring (16) for breakage.

Important

- Lubricate all the seal lips, bearings, gears, and bearing surfaces with axle lubricant prior to assembly.

ASSEMBLY OF AXLE

DIFFERENTIAL CASE ASSEMBLY

Install or Connect (Figures 1, 2 and 16)

Tool Required:
J 33790 Side Bearing Installer

1. Thrust washers (53) and side gears (54) into the differential case (35).
   - If the same gears and washers are being used, install them on the same side as they were removed from.
2. Pinion gears (56).
   - Position one pinion gear (56) between the side gears and rotate the gears until the pinion gear is directly opposite the opening in the case.
   - Place the other pinion gear (56) between the side gears, making sure the hole in both pinion gears line up.
3. Thrust washers (55).
   - Rotate the pinion gears toward the opening just enough to permit the sliding in of the thrust washers.
4. Shaft (52) and bolt (36).
5. Ring gear (37) onto the differential case (35).

NOTICE: See Notice on page 4C3-1 of this section.

6. Bolts (34).

Important

- Always install new bolts. Never reuse the old bolts.

Tighten

- Bolts (34) alternating in progressive steps to 80 N.m (60 ft. lbs.).

7. Side bearings (33), using J 33790 (figure 16).

4C3-2 7 1/4-INCH RING GEAR

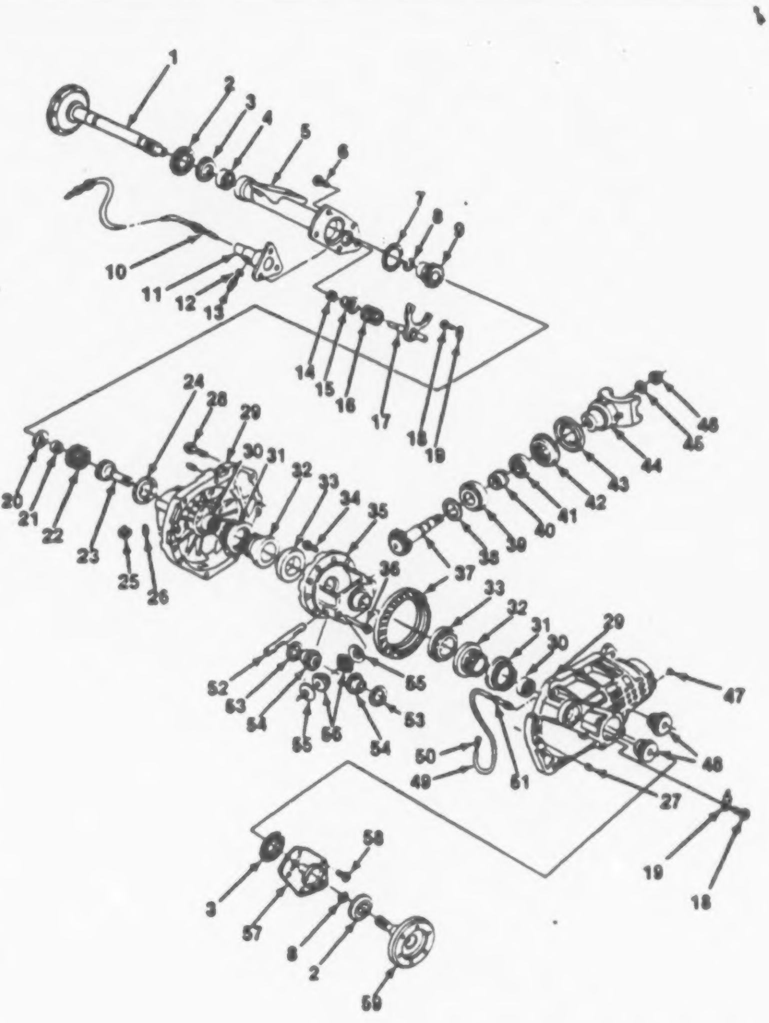
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Figure 1—Axle Components

1. Shaft
2. Deflector
3. Seal
4. Bearing
5. Tube
6. Bolt
7. Thrust Washer
8. Retaining Ring
9. Carrier Connector
10. Shift Cable
11. Shift Cable Housing
12. Gasket
13. Indicator Switch
14. Spring
15. Seal
16. Spring
17. Shift Shaft and Fork
18. Bolt
19. Lock Tab
20. Thrust Washer
21. Differential Pilot Bearing
22. Sleeve
23. Output Shaft
24. Washer
25. Plug
26. Washer
27. Pin
28. Bolt
29. Carrier Case
30. Bearing
31. Insert
32. Sleeve
33. Side Bearing
34. Bolt
35. Differential Case
36. Bolt
37. Ring and Pinion Gears
38. Shim
39. Bearing
40. Spacer
41. Bearing
42. Seal
43. Deflector
44. Flange
45. Washer
46. Nut
47. Plug
48. Bushing
49. Vent Hose
50. Vent
51. Fitting
52. Shaft
53. Thrust Washer
54. Side Gear
55. Thrust Washer
56. Differential Pinion Gear
57. Cover
58. Bolt
59. Shaft

Figure 2—Axle Components F1388

DISASSEMBLY OF AXLE

INSPECTION

Perform the following checks before disassembling the axle.

1. Remove the fill plug from the axle and drain the axle lubricant into a suitable container.
2. Check the ring gear backlash. Refer to "Backlash Adjustment." This information can be used to determine the cause of the axle problem. It will also help when setting up the shim packs for locating and preloading the differential case.
3. Inspect the case and oil for metal chips. Determine where the metal chips come from, such as a broken gear or bearing cage.
4. Determine the cause of the axle problem before disassembly if possible.

DISASSEMBLY

Disassemble (Figure 1 through 15)

Tools Required:
- J 8614-01 Pinion Flange Remover
- J 21551 Bearing Remover
- J 22912-01 Pinion Bearing Cone Remover
- J 29307 Slide Hammer
- J 33791 Bushing Remover
- J 33792 Side Bearing Adjuster Wrench
- J 33837 Pinion Bearing Cup Remover Kit
- J 34011 Output Shaft Pilot Bearing Remover

1. Bolts (6), shift cable housing (11), and spring (14).
2. Tube (5) and thrust washer (7).
3. Spring (16) and shift shaft and fork (17).
4. Shaft (1) with deflector (2).
   - Clamp the axle tube (5) in a vise. Clamp ONLY on the mounting flange.
   - Strike the inside of the shaft flange with a brass hammer to dislodge the shaft.
5. Carrier connector (9) with retaining ring (8).
6. Right seal (3) and bearing (4), using J 29369-2 and J 29307 (figure 3).
7. Seal (15) from the tube (5). Pry out with a screwdriver.
8. Thrust washer (20).
9. Sleeve (22) and output shaft (23).

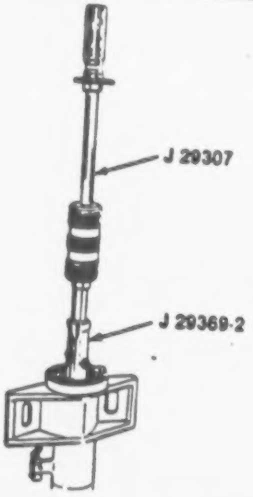

Figure 3—Removing the Axle Tube Bearing and Seal

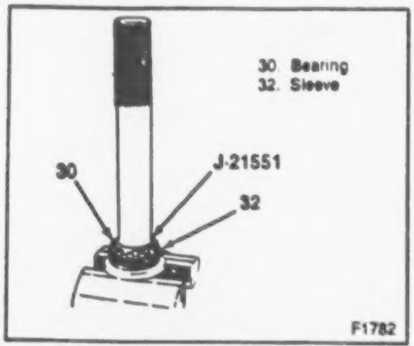
30. Bearing
32. Sleeve
30
J-21551
32
F1782

Figure 9—Remove the Sleeve Bearing

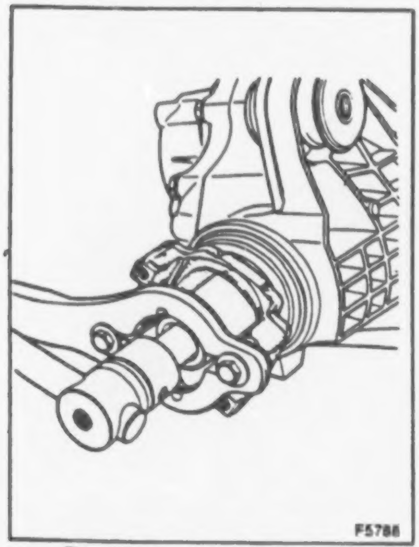

Figure 10—Removing the Pinion Nut

- Mount the left carrier case half in J 33837-1 (figure 11).

22. Flange (44) and deflector (43) using J 33837-1 and J 33837-3 (figure 11).
23. Pinion (37), with spacer (40), pinion bearing (39) and shim (38).
24. Spacer (40) from the pinion.
25. Bearing (39) from the pinion. Use J 22912-01 and a press (figure 12).
26. Shim (38).
27. Bearing and cup (41) and seal (42), using J 33837-1, J 33837-3, and J 33837-6.

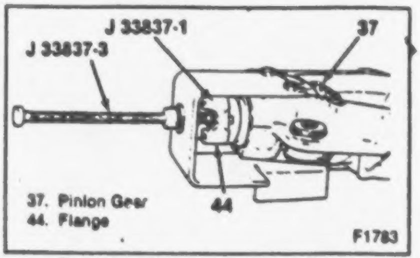
J 33837-1
37
J 33837-3
37. Pinion Gear
44. Flange
44
F1783

Figure 11—Remove the Pinion Flange

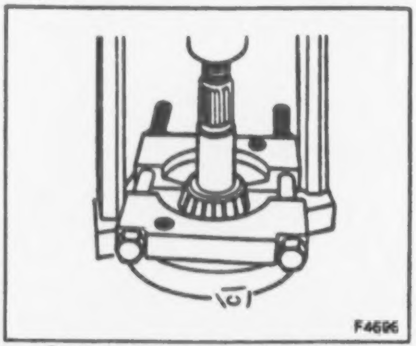

Figure 12—Removing the Pinion Bearing

- Insert J 33837-6 into the pinion bore.
- Thread the forcing screw (J 33837-3) into J 33837-6.
- Turn the forcing screw to pull the parts from the case.

28. Inner bearing cup by pushing it out using J 33837-1, J 33837-3, and J 33837-6 (figure 13).

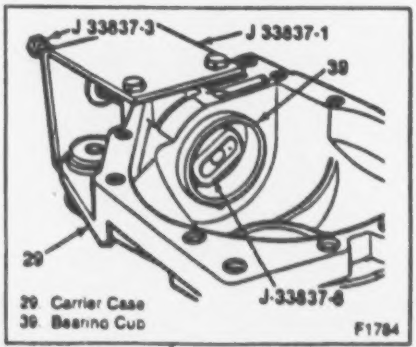
J 33837-3
J 33837-1
39
29
29. Carrier Case
39. Bearing Cup
J-33837-6
F1784

Figure 13—Removing the Inner Pinion Bearing Cup

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29. Bolt (36) and shaft (52) from the differential case (35).
30. Differential pinion gears (56) and thrust washers (55).
31. Side gears (54) and thrust washers (53).
    - Mark the side gears and case so they can be installed in their original location.
32. Bolts (34).
33. Ring gear (37).
    - Do not pry between the ring gear and the Drive the gear off with a brass drift and mer.
34. Side bearings (33), using J 22912-01 (31) 14).
35. Bushings (48). Use J 33791 (figure 15).

CLEANING AND INSPECTION

CLEANING

Do not steam clean drive parts having ground and polished surfaces such as gears, bearings, and shafts. These parts should be cleaned in a suitable solvent. All parts should be disassembled before cleaning.

Parts should be thoroughly dried immediately after cleaning. Use soft, clean, lintless rags. Parts may be dried with compressed air. Do not allow the bearings to spin while drying them with compressed air.

INSPECTION

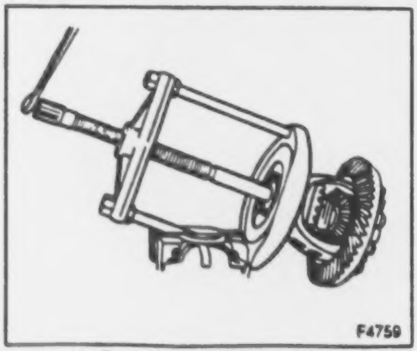
It is very important to carefully and thoroughly inspect all drive unit parts before assembly.

Thorough inspection of the drive parts for wear or stress and subsequent replacement of worn parts will eliminate costly drive component repair after reassembly.

AXLE HOUSING

Inspect

- Carrier bore for nicks or burrs that would prevent the outer diameter of the pinion seal from sealing. Remove any burrs that are found.
- Bearing cup surfaces for nicks or burrs. Remove any burrs that are found.
- Housing for cracks. Replace the housing if any cracks are found.
- Housing for foreign material such as metal chips, dirt, or rust. Refer to "Cleaning" in this section.



Removing the Differential Side Bearing

DIFFERENTIAL

Inspect

- Pinion gear shaft for unusual wear.
- Pinion gear and side gear teeth for wear, scoring, spalling.
- Thrust washers for wear.
- The fit of the differential side gears in the tial case.

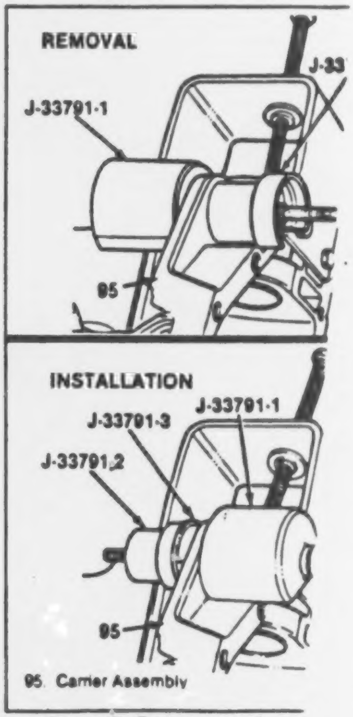


Figure 15—Replacing the Case I

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

Disassembly of axle.

1. What is step #3 under inspection?
2. For disassembly, which tool is J33837?
3. What is the label for figure 5?
4. In figure 7, what are parts 19 and 20?
5. List the steps for step #27.
6. List 3 steps for cleaning parts.
7. Why is it necessary to inspect drive parts before assembly?

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

4B4-11

SPECIFICATIONS

10 1/2-INCH RING GEAR AXLE (CORPORATE)

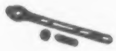
Fastener	N·m	Ft. Lbs.
Ring Gear Bolts	163	120
Bearing Cap Bolts	183	135
Axle Cover Bolts	27	20
Adjusting Nut Lock Bolts	30	22

Spacer and Shim Sizes	Size
Pinion Bearing Shims	0.006-inch 0.007-inch 0.008-inch 0.009-inch 0.010-inch 0.011-inch 0.012-inch 0.013-inch 0.014-inch 0.015-inch 0.016-inch 0.017-inch 0.018-inch 0.019-inch 0.020-inch 0.021-inch 0.022-inch 0.023-inch 0.024-inch
Lubricant	80W-90 GL-5

T2511

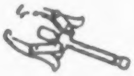
SPECIAL TOOLS

1.



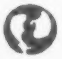
J 8614-01

2.



J 22888

3.



J 8608

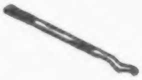
4.

J 8092

5.

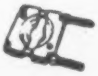
J 24433

6.



J 24429

7.



J 22912-01

1. Pinion Flange Remover
2. Side Bearing Remover
3. Rear Pinion Bearing Cup Installer
4. Driver Handle
5. Rear Pinion Bearing Cone Installer
6. Side Bearing Adjustment Spanner
7. Rear Pinion Bearing Cone Remover
8. Pinion Pilot Bearing Installer (Not Illustrated)

F4662

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

Answer the following questions.

1. What is part J 8092?
2. What does Ft. Lbs. stand for?
3. What is part 8?
4. What is tool number J 24429?
5. When you use any of these tools, what are you repairing or replacing?

CASAS Objective 6.5.2 - Recognize or evaluate simple geometric formulas
CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles

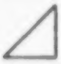
SHEET METAL IV

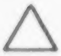
REVIEW ITEMS - Plane Figures

Match the lettered items in Column II with the numbered items in Column I. Place the letter indicating your choice in Column I in the blank opposite the corresponding number.

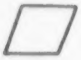
Column I

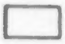
1. ____ Square

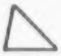
2. ____  Isosceles Right Triangle

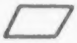
3. ____  Equilateral Triangle

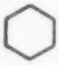
4. ____ Circle

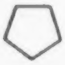
5. ____  Rhombus

6. ____  Rectangle

7. ____  Scalene Triangle

8. ____  Parallelogram

9. ____  Hexagon

10. ____  Pentagon

Column II

a. Three sides of unequal length
b. Four sides of equal length
c. Contains two 45° angles
d. Each included angle contains 72°
e. Eight sides of equal length
f. Two sides of equal length
g. Each included angle contains 40°
h. Contains three 60° angles
i. Contains 360°
j. Contains three 45° angles
k. Opposite sides are parallel
l. Each side equal to radius of circumscribing circle
m. Contains four 90° angles
n. Contains 180°

CINTAS

Site: Cafeteria of Cintas Uniform Company
Landover, MD.

Instructor: Susan Dolan

Time: Volunteer
November 11, 1991 - January 28, 1992
Monday andTuesday
3:30 - 5:30 PM

Student: Newly immigrated Asians whose workplace tasks were involved with the sorting, cleaning, pressing and mending of uniforms.

Instructor Summary:

Cintas Corporation is a uniform cleaning company in Landover, Maryland. There is a large immigrant population that performs entry level operational duties: cleaning, tagging, and folding of clothes.

Classes, totalling 40 hours - 10 weeks, were held from November, 1991 to February, 1992.

The students were from Vietnam with the exception of one man from Ethiopia. Most of them were at beginning level English, having been in the country an average of five months. The Vietnamese students were mothers of Amerasians with little education.

They were a wonderful group of employees, hard working and attentive. The major difficulty at times was the lack of a classroom. The result was that the class was often held in the company cafeteria which had no blackboard. People kept coming in and out, using vending machines. The teacher had to compete with constant public address system announcements.

Lessons were geared to beginning level English proficiency. Vocabulary (5-10 words a day), forming questions and answers based on personal information, and simple discussions modeled and repeated on Cintas, its operations and employee specific duties were the basis of instruction.

Besides day to day English, students practiced calling in sick and communicating with co-workers and superiors. This was the underpinning of the course - Better Communication. This was practiced a great deal. By the end of the course, the personnel director and the supervisors reported improved communication.

91

We discussed uniform dress, the meaning of the company newsletters, and company rules to be followed (no eating or drinking in the plant, smoking only in the lunchroom).

It must be reiterated that these were beginning English students. Gains were there, but they came slowly. We occasionally used a text called Expressways. Each class the teacher placed a simple paragraph on the board to be copied. The paragraph referred to work at Cintas and activities from daily life. One paragraph was how to write a letter to their children's teachers. This was a great lesson. The students learned punctuation, capitalization, indentation, and vocabulary. When they were finished each student read the paragraph. The teacher then asked simple questions based on the paragraph. Each student kept a log of all the paragraphs which were read and reread.

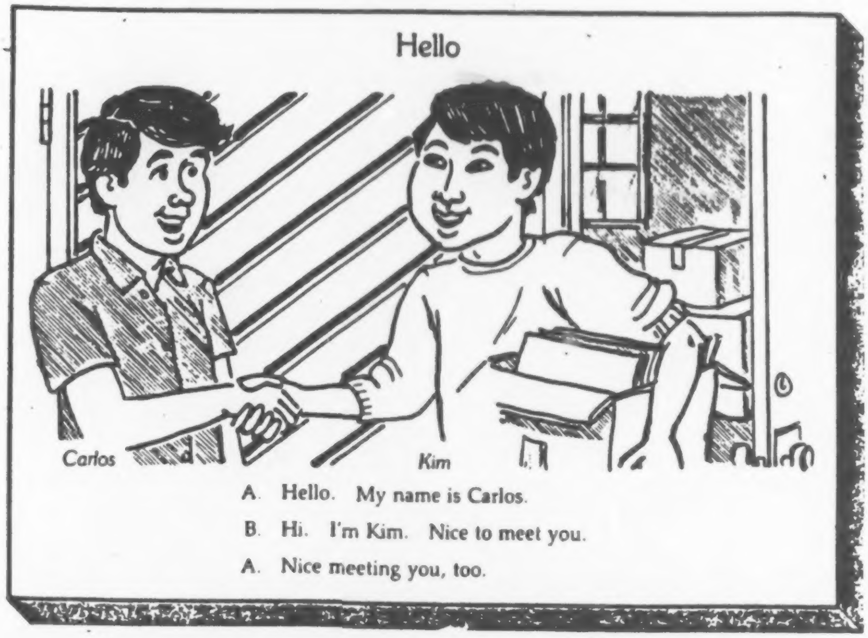
To summarize, the course was divided between work-place communication and performance and basic English skill building - oral and written.

The students asked the teacher if she was coming back, and a new course was arranged, but company layoffs prevented resumption of the class.

Certificates and personal letters of commendation from the teacher were awarded at a "graduation party".

CASAS Objective 0.1.4 - Identify or use a variety of affective language functions (e.g. apologize, congratulate, complain, disagree, express pleasure, sympathy, disappointment and regret)

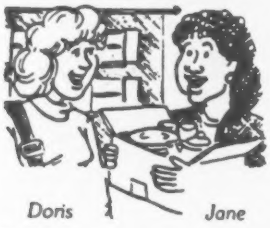
HELLO


Hello
Carlos
Kim

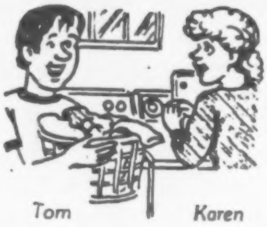
A. Hello. My name is Carlos.

B. Hi. I'm Kim. Nice to meet you.

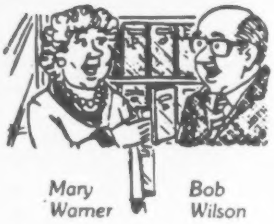
A. Nice meeting you, too.



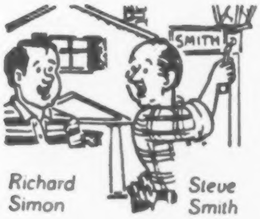
1.



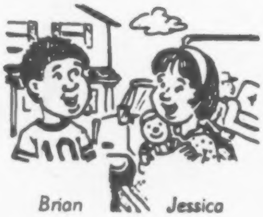
2.


Mary Warner
Bob Wilson

3.


SMITH
Richard Simon
Steve Smith

4.


Brian
Jessica

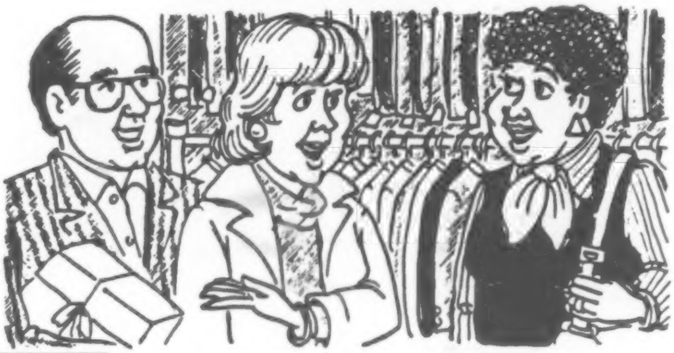
5.

Now present your own conversations

CASAS Objective 0.1.3 - Identify or use appropriate language in general conversation

INTRODUCE

I'd Like to Introduce....



my husband, Michael

A. Hi! How are you?

B. Fine. And you?

A. Fine, thanks. I'd like to introduce you to my husband, Michael.

B. Nice to meet you.

1. my wife, Barbara

2. my father, Mr. Peterson

3. my mother, Mrs. Chen

4. my brother, George

5. my sister, Irene

"I'D LIKE TO INTRODUCE..."

Now present your own conversations

CASAS Objective 4.2.4 - Interpret employee handbooks

1. Be on time!
   7:00 - production
   8:00 - stockroom
   Be in uniform
2. If you are sick, call your supervisor - 927-2424
3. Punch your own time clock.
4. Employee must meet standards.
5. Wear uniform properly.
6. Keep lunchroom, washroom, and work area clean.
7. Do not eat or drink in plant.
8. Smoke in lunchroom or outside only.
9. Personal phone calls during break only, except in an emergency.
10. No personal visitors.

ON-THE-JOB POLICIES:

PRODUCTION AND STOCKROOM DEPARTMENTS

1. **Starting Time:** Production 7:00 AM, Stockroom 8:00 AM. You must be in uniform and at your job by this time. If you are late 3 times in month or 5 times in 3 months you will be put on "final notice."

2. **Attendance:** If you are unable to report, you or someone you can trust should call your Supervisor prior to the start of your scheduled shift. The reason and probable length of the absence must be given. Verification may be required. Frequent absences cannot to tolerated, and an employee with continuing absenteeism will be terminated.

3. **Time Clock:** Each person is responsible for punching their own card - no exceptions!

4. **Standards:** Most jobs have minimum acceptable quantity and quality requirements called "standards." New employees will have 30 days to achieve the standards for their job. If standards are not met the employee may be assigned to another job if one is available that they might be qualified for - otherwise they will be released.

5. **Uniforms** must be worn properly at all times on the job: clean, neat, buttoned, tucked in, etc. Spare uniforms and/or personal garments must be kept in your locker.

6. **Housekeeping:** Please assist by keeping the lunchroom, washroom, and your work area clean and picked up throughout the day.

7. **Eating and Drinking** is not allowed in the plant.

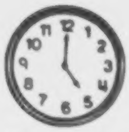
8. **Smoking** is allowed in the lunchroom or outside during breaks only.

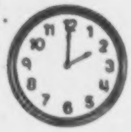
9. **Personal phone calls** must be made during breaks from the employee phones only, except in the case of an emergency.

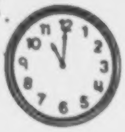
10. **Personal visitors** are discouraged. If a visit is essential, the visitor must check in with the office receptionist and remain in the lobby. Your Supervisor may direct you to meet with them there. No unauthorized people are allowed in the plant or office.

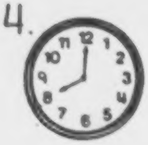
CASAS Objective 2.3.1 - Interpret clock time.

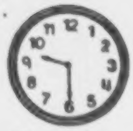
WRITE THE TIME

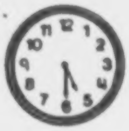
1.

5:00

2.

____

3.

____

4.

____

5.

9:30

6.

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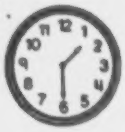
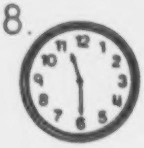
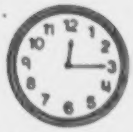
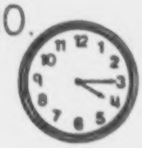
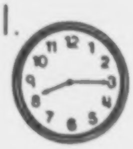
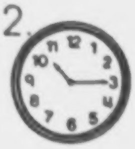
7.

____

8.

____

9.

12:15

10.

____

11.

____

12.

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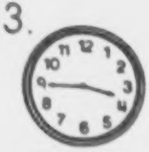
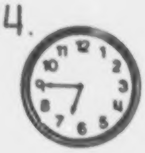
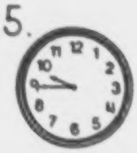
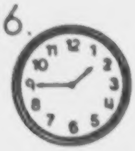
13.

3:45

14.

____

15.

____

16.

____

PRODUCTION DEPT. GUIDELINES

1. **Safety Precaution # 1:** Smoking is not allowed in the plant production areas. Smoking is only allowed in the lunchroom and restrooms during breaks.
2. **Safety Precaution # 2:** Visitors are not allowed in plant production work areas. They must remain in the lunchroom or outside.
3. **Be on time to work.** If you know you are going to be absent or late, notify a Supervisor as soon as possible at 927-2424.
4. **Cintas will provide you with uniforms.** Please be sure to wear them while at work. Do not alter your uniforms. Sizes changes are available.
5. **Personal telephone calls** should be brief and be made during your breaks only. Please advise your family and friends that they should call you only in the case of an emergency.
6. **Eating** at work stations is strictly prohibited. You may eat in the lunchroom or outside the building during breaks.
7. **Personal business** should be conducted on your own time. Your Supervisor should be notified of any event causing you to leave work. When leaving work, please be sure you punch your time card. Missed work time can be made up only with your supervisor's approval.

CASAS Objective 2.3.2 - Identify the months of the year and the days of the week.

AUXILIARY PLANT CLEANINGS

Eugene Washington

Time	Item
7:00 AM	Report to Wash Alley
8:00 AM	Monday - Remove and replace rugs from stockroom. Sweep and dust-mop stockroom.
	Tuesday - Remove and replace rugs from #2 side sorts. Sweep and dust-mop stockroom.
	Wednesday - Remove and replace rugs from hanging area, route sort area, and both repair stations. Sweep and dust-mop stockroom.
	Thursday - Remove and replace rugs from #1 side sorts. Sweep and dust-mop stockroom.
	Friday - Remove and replace rugs from office and lunchroom hallway. Sweep and dust-mop stockroom.
9:15 AM	Break
9:30 AM	Return to Wash Alley
12:00 Noon	Lunch
12:30 PM	Clean entire lunch room. (Wipe down tables and chairs, sweep and mop floors, throw out garbage, wipe down all counters, vending machines, refrigerator, sink, etc.)
1:30 PM	Clean supply room or special project
2:00 PM	Return to Wash Alley
3:15 PM	Go Home

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions.

HOUSEKEEPING DAILY CHECKLIST

PLANT CUSTODIAN - NATE CHAPMAN
HOUSEKEEPING DAILY CHECKLIST

TIME	ITEM
7:00 AM	Remove garbage from plant and place into disposal container
9:00 AM	Dust-mop loading area
9:15 AM	Break
9:30 AM	Clean outside front
10:30 AM	Dust-mop entire plant
11:30	Sand designated floor areas
12:00 Noon	Clean both plant bathrooms
12:30 PM	Sweep and mop lunchroom hallway
1:00 PM	Lunch
1:30 PM	Clean outside loading lot
2:15 PM	Remove garbage from plant and place into disposal container
3:15 PM	Go home

CASAS Objective4.4.1 - Identify appropriate behavior, attitudes, and social interaction for keeping a job and getting a promotion

REPORTING A ABSENCE

I THINK I HAVE THE FLU

Look and Listen

Mr. Carter: Hello. Central Plating. This is Mr. Carter speaking.

Juan: This is Juan Torres. I'm sorry. I can't come to work today.

Mr. Carter: Oh? What's the matter?

Juan: I have a fever and a bad headache. I think I have the flu.

Mr. Carter: That's too bad. Get some rest. I hope you feel better.

Juan: Thank you.

Check Your Understanding

Circle the correct answer.

1. Who is talking to Juan on the phone?
   a coworker his boss
2. Where does Juan work?
   in a hospital at Central Plating
3. What's the matter with Juan? (You may choose more than one word.)
   cough backache earache headache stomachache fever
4. What does Juan's boss tell him to do?
   get some rest go to a doctor
5. Is Juan going to work today?
   yes no

Practice

Write the words below in the blanks.

work
speak
call
sick

Juan: Hello. May I __________ to Mr. Carter?

Mr. Carter: This is Mr. Carter.

Juan: This is Juan Torres. I'm __________. I can't come to __________ today.

Mr. Carter: Thanks for calling. Please __________ me tomorrow if you're still sick.

Juan: OK. I will.

I'M GOING TO BE LATE

Look and Listen

Bob: Central Plating. This is Bob speaking.

Juan: This is Juan Torres. May I speak to Mr. Carter?

Bob: I'm sorry, Juan. He isn't here right now.

Juan: Could I leave a message, please? Tell him I'm going to be late to work today because my daughter broke her arm.

Bob: I'm sorry to hear that. Could you spell your last name, please?

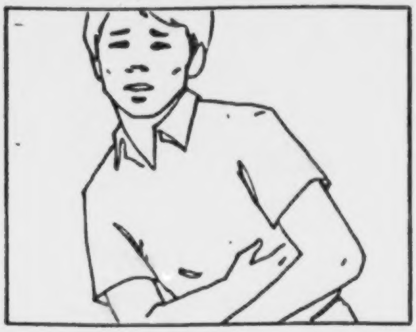
Juan: T-o-r-r-e-s.

Bob: OK. I've got it. I'll give him the message.

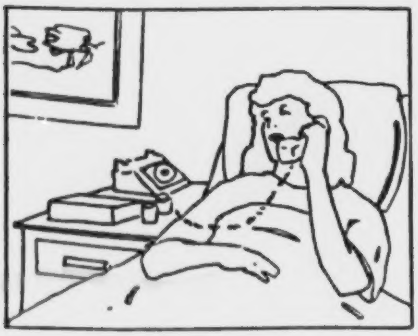
Practice

Match the pictures with the correct words.

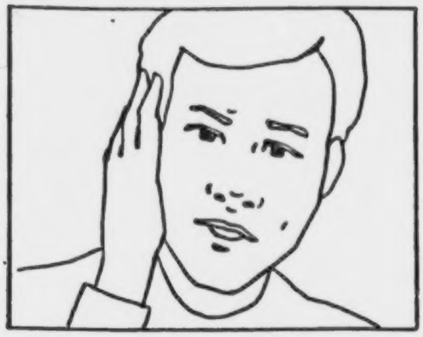
a.



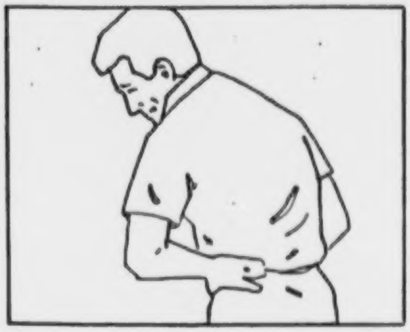
b.



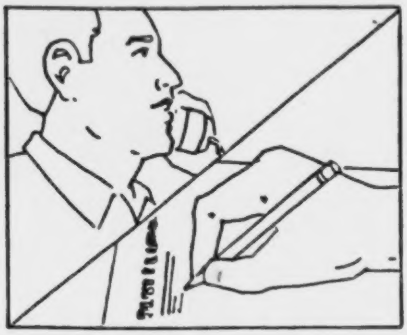
c.



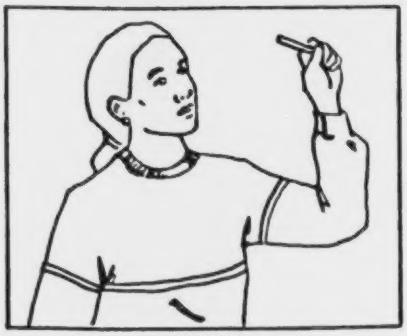
d.



e.



f.



____ **1.** She has a fever.

____ **2.** He has a backache.

____ **3.** He has a stomachache.

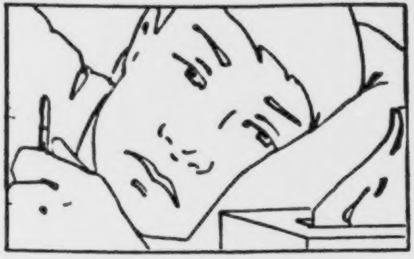
____ **4.** He has an earache.

____ **5.** He's leaving a message.

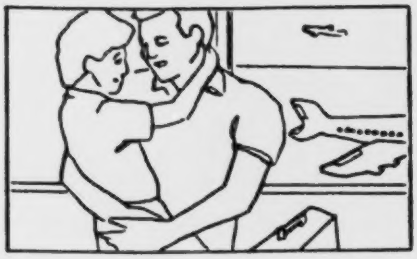
____ **6.** She's calling in sick.

VOCABULARY

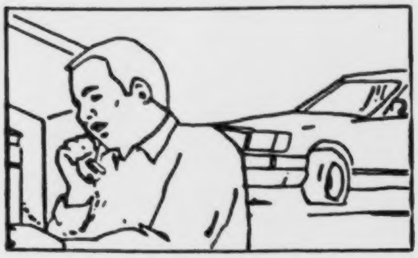
1.



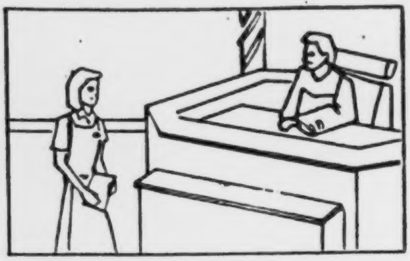
2.



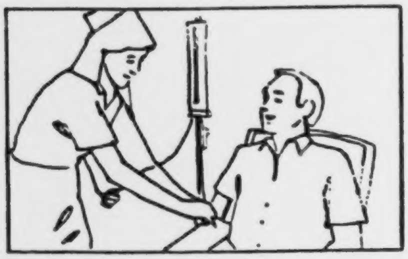
3.



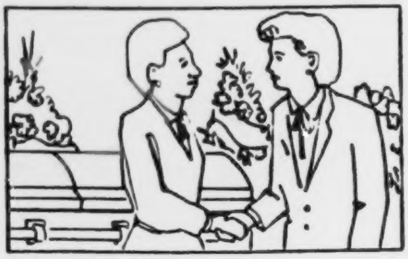
4.



5.



6.



Match each phrase to the correct picture.

____ My car broke down.

____ I have to go to a funeral.

____ I have to go to court.

____ I have to go to the airport.

____ I have a doctor's appointment.

____ I'm sick.

TALKING TOGETHER

Make a conversation reporting a need to leave work early. Use the questions and sentences below or make up your own. Then practice with a partner.

Juan	Mr. Carter
No, I couldn't. But I can come in early tomorrow morning.	Yes, Juan. What is it?
I have a doctor's appointment tomorrow at 3 P.M. I have to leave early.	OK. That would be fine.
Thank you, Mr. Carter.	Oh? You couldn't get an appointment on your day off?

Juan: Mr. Carter, may I speak to you for a moment, please?

Mr. Carter: ____________________

Juan: ____________________

Mr. Carter: ____________________

Juan: ____________________

Mr. Carter: ____________________

Juan: ____________________

WORDS FOR WORK

Part 1

Which word does *not* belong? Cross out the word.

1. headache earache backache message
2. speak stomachache rest come
3. spell leave call earache
4. stomachache flu headache backache
5. come break coworker get

Part 2

Write each word below in the correct list.

coworker
speak
spell
earache
boss
headache
come
get
break
flu
stomachache
leave

Action Words	Illnesses	People
______________	______________	______________
______________	______________	______________
______________	______________	
______________	______________	
______________		
______________		

SPEAKING PRACTICE

Complete the conversations. Then practice in pairs. Use your real names. Give a variety of reasons for being absent or late.

1. Worker: This is __________ __________. I'm sorry. I can't come to work today.

Boss: Oh? What's __________ __________?

Worker: I have ____________________.

Boss: That's __________. I hope you __________ __________.

Worker: Thanks.

2. Worker: This is __________ __________. I'm going to be late to work today.

Boss: Oh? What's __________ __________?

Worker: I have ____________________.

Boss: That's OK. Thanks for calling.

3. Worker: This is __________ __________. May I speak to __________?

Coworker: I'm __________. He or She isn't __________ right now.

Worker: Could I leave a ____________________, please? Tell him or her I __________ come to work today because ____________________.

Coworker: Could you spell your last __________, please?

Worker: __________.

Coworker: OK. I've __________ it. I'll give him or her the message.

SPEAKING PRACTICE

Part 1

Read or listen to each reason. Write *A* if it is a reason for absence from work. Write *L* if it is a reason for being late. Explain your answers.

____ **1.** My car won't start.

____ **2.** I have the flu.

____ **3.** I have to take my son to the dentist.

____ **4.** My daughter cut her head. I have to take her to the doctor.

____ **5.** My mother passed away.

____ **6.** A burglar broke into my house.

____ **7.** My sink is leaking. A plumber is coming.

____ **8.** I have to go to court.

Part 2

Complete the statement below with a reason for being late or absent. Then give a time or date you'll be in to work. Practice with a partner.

Example: I'll be late to work today because my car won't start. I'll be in at 11:00.

OR

I can't come to work today because my grandmother passed away. I'll be in on Thursday.

Worker: I'll be late.

I can't come to work today because ____________________________

____.

I'll be in ____.

STRUCTURE WORK

Part 1

Choose the correct word to complete each sentence.

has	is	have	am

Example: He has a headache.

1. I _______ a temperature and a bad headache.
2. This _______ Juan Torres.
3. He _______ to go to the dentist.
4. I _______ in bed resting.
5. He _______ a backache.
6. She _______ calling in sick.
7. I think I _______ the flu.
8. He _______ leaving a message.
9. She _______ taking her son to the doctor.
10. She _______ an earache.

Part 2

Work with a partner. Ask your partner to leave a message for your boss saying that you won't be in to work. Give the reason. Say when you'll come back to work.

Message

To: ______________________________

From: ______________________________

Date: ______________ **Time:** ______________ **A.M. P.M.**

____

____

____

PROBLEM SOLVING

Ahead or Same Day?

Some reasons for being late or absent can be reported ahead of time. Some must be reported the same day. Check *ahead* or *same day* next to each reason below.

	Ahead	Same day
1. I have a dentist's appointment at 2 P.M. on Thursday.		
2. My mother is in the hospital. I need to leave early to see her.		
3. My car broke down.		
4. My daughter has the measles.		
5. My alarm didn't go off.		
6. I have to take my daughter to the eye doctor on Monday.		
7. I have a fever and a sore throat.		
8. I have to leave early to pick up my car at the shop.		
9. My brother is arriving from Mexico.		
10. I'm moving to a new apartment.		

GRACE CULINARY SYSTEMS

Site: Conference room located in the Grace Culinary Systems Facility in Laurel, MD.

Instructor: Dona Pao

Time: Volunteer

Class 1 - September 30, 1991 - December 26, 1991
Monday and Wednesday
3:00 - 4:00 PM

Class 2 - September 30, 1991 - December 26, 1991
Monday and Wednesday
4:00 - 5:00 PM

Class 3 - September 30, 1991 - December 26, 1991
Tuesday and Thursday
3:00 - 4:00 PM

Class 4 - September 30, 1991 - December 26, 1991
Tuesday and Thursday
4:00 - 5:00 PM

Class 5 - October 1, 1991 - December 26, 1991
Tuesday and Thursday
6:30 - 7:30 AM

Student: Newly immigrated Hispanics whose work tasks included loading and unloading food from trucks, cleaning and processing produce, following recipes, cooking, packaging, and quick freezing food.

Instructor Summary:

Grace Culinary Systems is a food service company, located in Laurel, Maryland. This company prepares menu items for distribution to restaurants, airlines, and other food-serving locations. The majority of the employees are Hispanic immigrants, and, therefore, a communication problem was evident between English-speaking, and Spanish-speaking employees. The employees needed to have at least a minimal working knowledge of English to follow safety regulations throughout the plant, and to be able to precisely follow food-preparation and sanitation instructions. Management was enthusiastic about the idea of having English classes at the plant, and this enthusiasm was conveyed to the employees. When registration took place, 62 students enrolled. These students were placed in five different classes held twice a week. A difficulty arose when students with different skill levels had to be placed in the same classes because of their work shifts. They were not given work release time. Classes were held in the conference room and sometimes in the cafeteria when the conference room was in use. Attendance declined rather quickly and nothing was done by the company to identify and resolve the problem of lagging attendance. After the first month, attendance had dropped to a steady eight dedicated students. The initial five classes were merged into two. Unfortunately, lack of management support and dedication became a prime factor in deciding to terminate the program. The following paragraphs are the teacher's comments regarding the students, the management, and the program itself.

THE ESL STUDENTS

The students worked at the plant cleaning vegetables, making soups, baking breads and cakes, packaging food, cleaning facilities, and performing other jobs related to food preparation and packaging.

All of the students were from Latin America - the majority from El Salvador and Mexico, with a few from Honduras and South America. They were mostly young men who had come to the United States looking for work to send money home to their families. A large portion of them, as is true for many Hispanic immigrants, had very little formal education. The average educational level seemed to be equivalent to middle school or beginning high school. This posed a difficult issue in how to teach them English when many didn't have the knowledge or skills in Spanish. At times it was necessary to briefly teach in their native language in order for them to grasp a concept in English. These circumstances made it necessary to teach partly in Spanish for understanding to be achieved. It was soon evident that many of the students dropped class because they were embarrassed by their illiteracy in front of the other students. These students had come from agriculturally-based homes where schooling was not a priority. Some students didn't see English as a need since they had worked and lived in this country without having been forced to use it. Those students that did commit their time to the classes were very enthusiastic and ready to learn. Two books were selected as the main source of instruction, *Expressways* and *Working in English*, but as with any source, they were not sufficient alone. Therefore, supporting materials were selected from other sources. It was especially difficult since some students had a working knowledge of English and could have been placed in an intermediate or advanced-intermediate level. But due to shifts at the company, they were mixed in with a class of beginners. Therefore, many other materials needed to be selected from more advanced texts to challenge them.

Unfortunately, because of the drop in class attendance, classes were ended after only three months. The students who consistently attended class and had a great desire to learn English were referred to existing ABE classes.

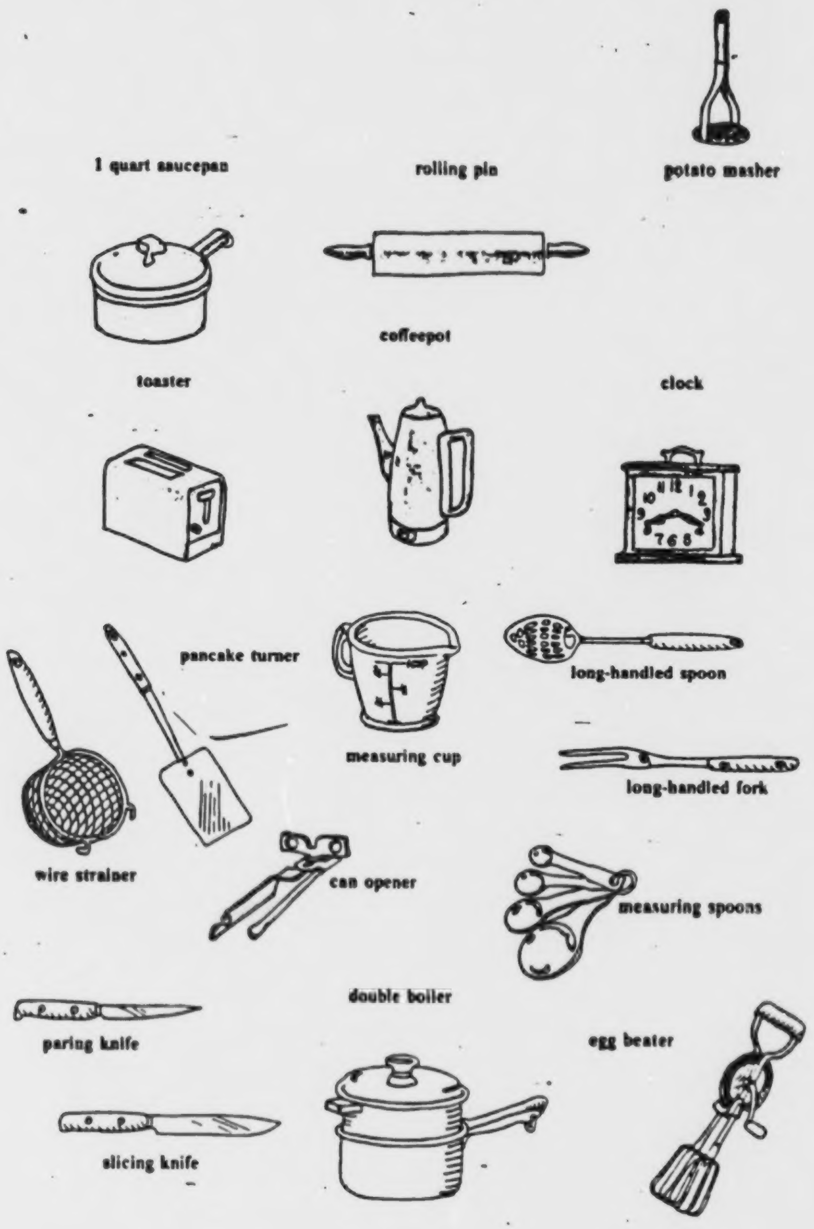
THE MANAGEMENT

For the first two or three classes, the management (mainly the vice-president and two managers) took an interest in the classes and were happy to see that so many of the employees had registered for the English classes. However, once the classes were in effect, management as a whole withdrew its support and relied upon the teacher and a Hispanic manager to deal with problems and concerns. There appeared to be very little interest in the success of the program, which was quickly noted by the employees. They were able to sense that there was a lack of commitment from their supervisors and managers, and the employees followed the lead in the attitude that the classes weren't very important. However, this should not discredit two of the managers (one Caucasian and one Hispanic) who encouraged and assisted those students under their supervision. Two Hispanic managers made it possible for communication between management and subordinates, but it was very inconvenient since they needed to be tracked down in certain situations to act as translators. It is truly believed that if management had taken more of an interest in the classes and placed greater importance on them, that the program would have been more successful.

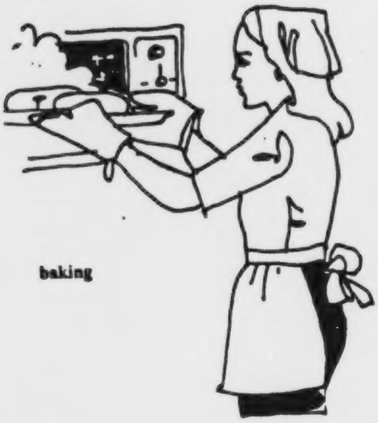
THE PROGRAM

The course design/curriculum was left to the discretion of the teacher. At first she began teaching introductions and greetings to initiate basic conversation; later adding supporting material such as likes and dislikes, family members, the verbs "to be", etc. From there, she went to workplace vocabulary such as fruits and vegetables, meats, and other products used in the plant. Workplace documents were also used such as recipes and quality control sheets to relate English to the students' work. For those students who were more advanced, she moved on to the past tense, utilizing both regular and irregular past tense forms. Other topics of lesser emphasis were also addressed such as weather, the date, months of the year, days of the week, colors, etc.

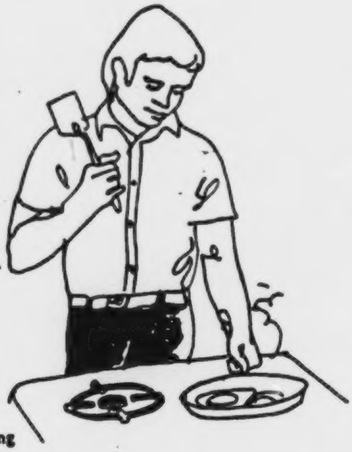
CASAS Objective 0.3.0 - Identify the correct picture or appropriate response from oral cues


1 quart saucepan
rolling pin
potato masher
coffeepot
toaster
clock
pancake turner
long-handled spoon
measuring cup
long-handled fork
wire strainer
can opener
measuring spoons
double boiler
paring knife
egg beater
slicing knife

CASAS Objective 0.3.0 - Identify the correct picture or appropriate response from oral cues

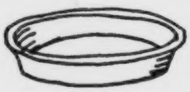


baking

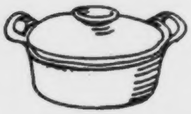


frying

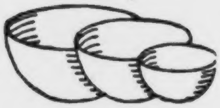
pie pan



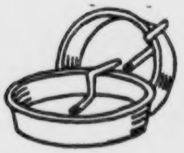
casserole



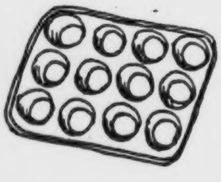
mixing bowls



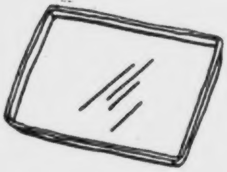
cake pans



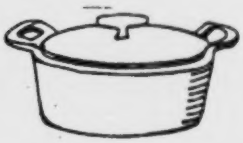
muffin pan



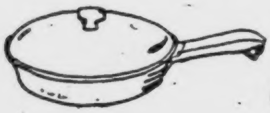
cookie sheet



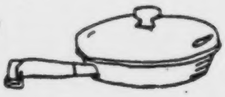
roasting pan



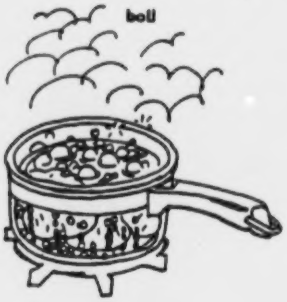
large frying pan

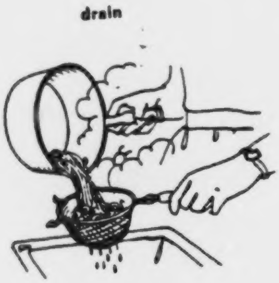


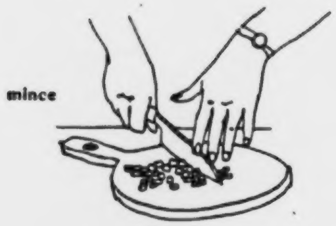
small frying pan

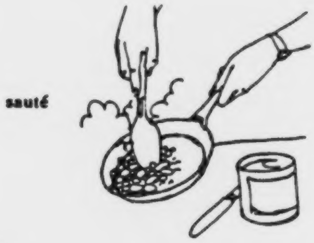


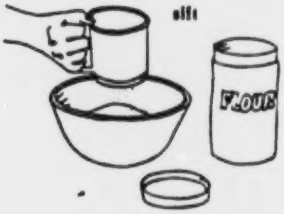
CASAS Objective 0.3.0 - Identify the correct picture or appropriate response from oral cues

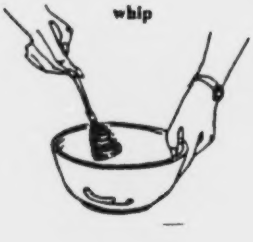




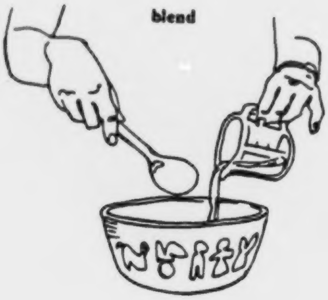


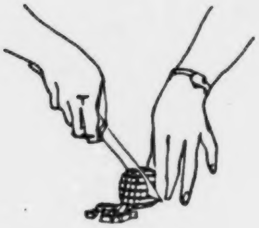


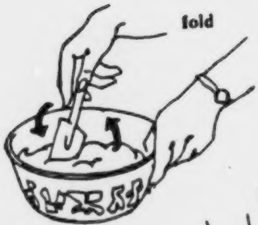


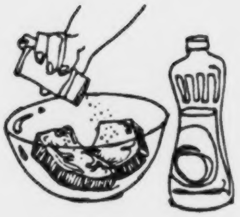


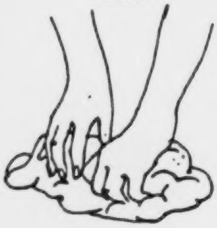
CASAS Objective 0.3.0 - Identify the correct picture or appropriate response from oral cues

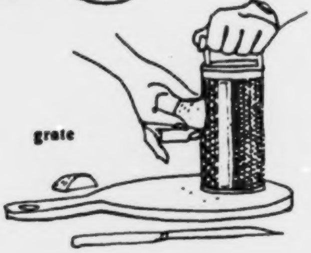

blend


cube

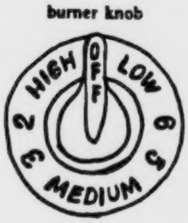

fold

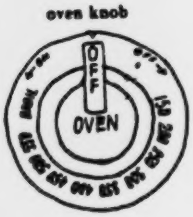

marinate


knead


grate

CASAS Objective 0.3.0 - Identify the correct picture or appropriate response from oral cues
CASAS Objective 1.1.5 - Interpret temperatures





Put an X in front of the right answer. Use the chart below for oven temperatures.

1. Your recipe says to use a very slow oven. Set the temperature between

_____ 450° and 500°

_____ 350° and 375°

_____ 250° and 275°

2. To boil water in a hurry, set the burner knob at

_____ High

_____ Medium

_____ Low

3. Your recipe says to use a moderate oven. Set the temperature between

_____ 250° and 275°

_____ 350° and 375°

_____ 450° and 500°

OVEN TEMPERATURES

Very Slow Oven	250° to 275°
Slow Oven	300° to 325°
Moderate Oven	350° to 375°
Hot Oven	400° to 425°
Very Hot Oven	450° to 500°

4. To keep cooked food warm, set the burner knob at

_____ High

_____ Medium

_____ Low

5. To melt butter without burning it, set the burner knob at

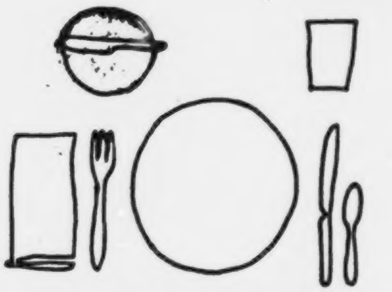
_____ High

_____ Medium

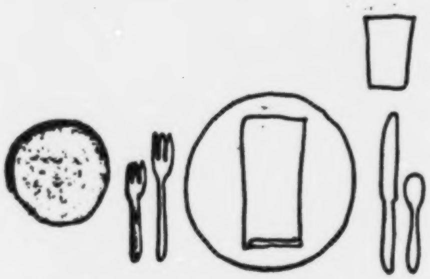
_____ Low

CASAS Objective 0.3.0 - Identify the correct picture or appropriate response from oral cues
CASAS Objective 8.1.3 - Recognize and/or demonstrate dining skills and manners

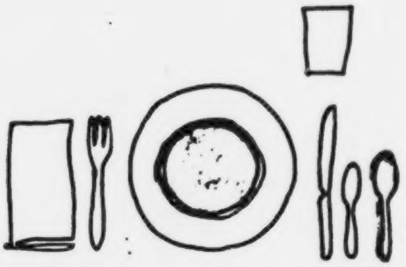
TABLE SETTINGS



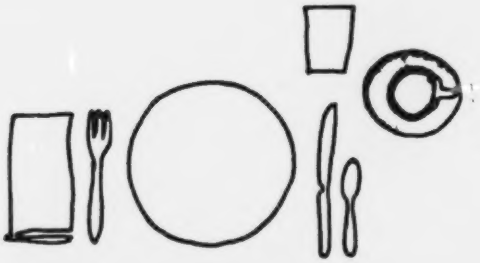
Butter knife and butter plate: The butter plate belongs at the tip of the fork. Put the butter knife on the butter plate.



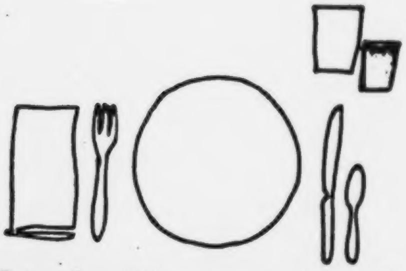
Salad plate and fork: The salad plate goes on the far left. Put the salad fork between the salad plate and the dinner fork. If there is no room for the napkin, put it on the plate.



Soup bowl and spoon: Put the soup bowl on the plate. Put the soup spoon on the far right.



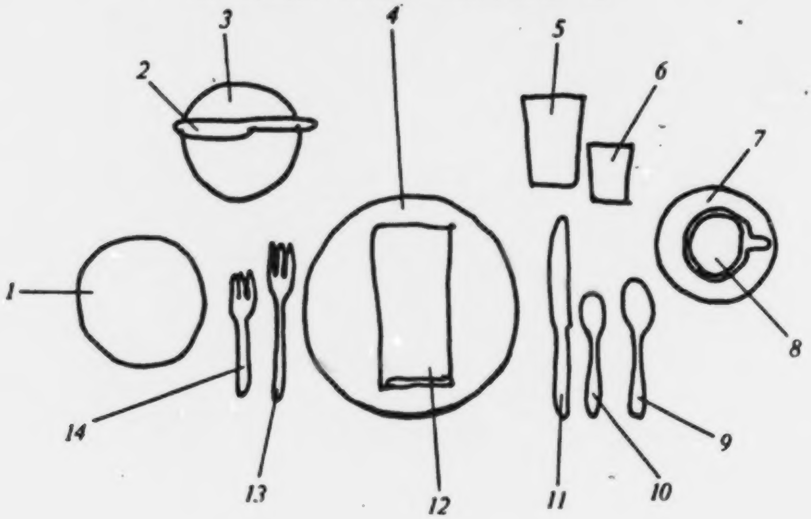
Cup and saucer: Put the coffee (or tea) cup on the far right. The handle of the cup points to the right.



Juice glass: When you serve juice, place the juice glass to the right of the water glass.

CASAS Objective 0.3.0 - Identify the correct picture or appropriate response from oral cues
CASAS Objective 8.1.3 - Recognize and/or demonstrate dining skills and manners

TABLE SETTINGS 2



There are 14 eating utensils in this picture. Write the name of each utensil beside its number below.

1. ______________________

2. ______________________

3. ______________________

4. ______________________

5. ______________________

6. ______________________

7. ______________________

8. ______________________

9. ______________________

10. ______________________

11. ______________________

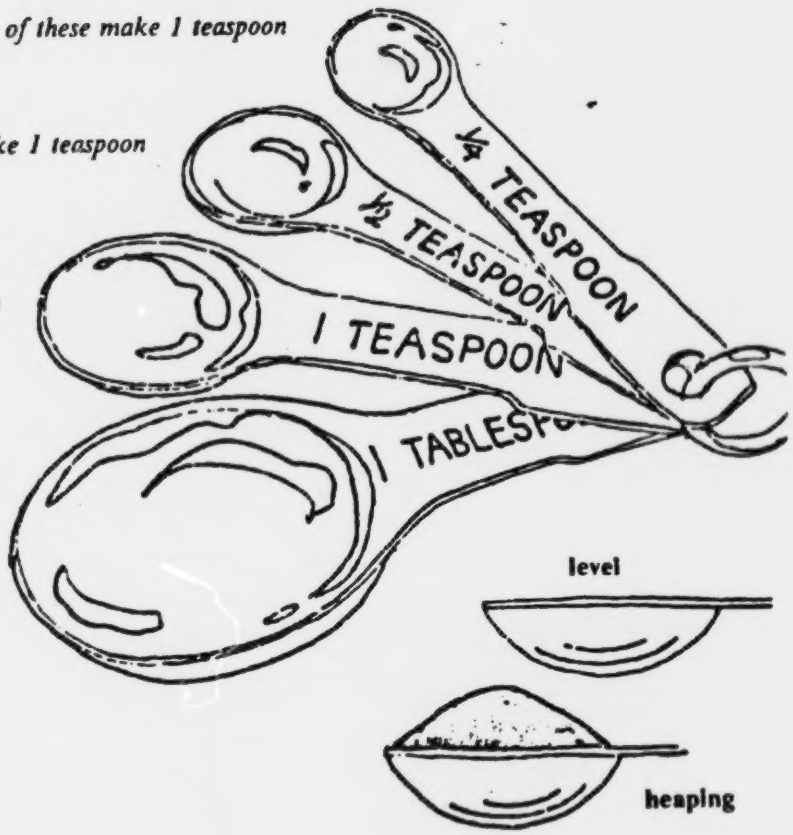
12. ______________________

13. ______________________

14. ______________________

CASAS Objective 0.3.0 - Identify the correct picture or appropriate response from oral cues
CASAS Objective 6.6.4 - Use measurement instruments

MEASURING SPOONS


¼ TEASPOON
½ TEASPOON
1 TEASPOON
1 TABLESP
level
heaping

4 of these make 1 teaspoon

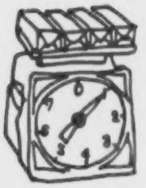
2 of these make 1 teaspoon

3 of these make 1 tablespoon

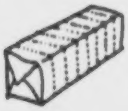
4 of these make ¼ cup
8 of these make ½ cup

CASAS Objective 0.3.0 - Identify the correct picture or appropriate response from oral cues
CASAS Objective 1.1.7 - Interpret product container weight and volume

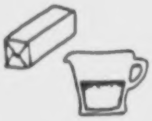
SCALE



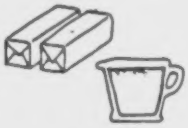
4 sticks make 1 pound



1 stick makes 8 tablespoons

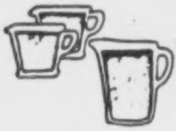


1 stick makes ½ cup

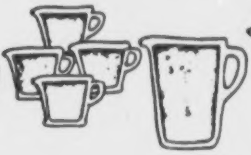


2 sticks make 1 cup

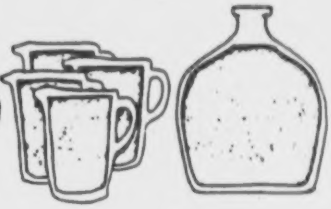
You don't need a measuring cup to measure butter or margarine. You can measure it by the stick. There are 8 tablespoons in each stick of butter. Eight tablespoons make ½ cup. If you need ½ cup of butter, use one stick. If you need ¼ cup of butter, cut the stick in two.



2 cups make 1 pint



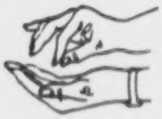
4 cups make 1 quart
2 pints make 1 quart



4 quarts make 1 gallon
8 pints make 1 gallon
16 cups make 1 gallon

Many recipes use *abbreviations* to save room. An abbreviation is a short way of naming something. You should know these abbreviations.

teaspoon	t. *or* tsp.	pound	lb.
tablespoon	T. *or* tbsp.	pint	pt.
cup	c.	quart	qt.
ounce	oz.	gallon	gal.



Sometimes a recipe calls for "a pinch" or "a dash" of some ingredient. Use a tiny little bit.
A dash is less than ⅛ teaspoon
A pinch is as much as you can hold between fingertip and thumb.

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

RECIPE

Here is a recipe for oatmeal cookies. Use it to learn about cooking terms. Think about the utensils you would need to bake cookies. How would you follow this recipe?

OATMEAL COOKIES

1 cup flour
1 teaspoon baking powder
¼ teaspoon salt
½ teaspoon cinnamon
¼ teaspoon nutmeg
1 cup brown sugar

1 cup oatmeal, uncooked
¼ cup vegetable oil
2 tablespoons milk
1 egg
½ cup chopped nuts
¼ cup raisins

1. Set oven at 375°.
2. Combine the flour, baking powder, salt, cinnamon, and nutmeg in a bowl.
3. Add the brown sugar and oatmeal. Mix everything together.
4. Add the vegetable oil, milk, and egg. Mix well.
5. Stir in the nuts and raisins.
6. Grease a cookie sheet.
7. Drop teaspoons of the dough on the cookie sheet. Each teaspoon of dough should be about two inches from the next one.
8. Place in the oven. Bake at 375° for 10 minutes.
   Makes three dozen cookies

1. Find four cooking terms in the recipe for oatmeal cookies. Write the terms in the blanks on the left. On the right, tell what the terms mean.

______________ ______________________________
____

______________ ______________________________
____

______________ ______________________________
____

______________ ______________________________
____

2. What ingredients do you need to make oatmeal cookies? Write them in the blanks.

______________ ______________ ______________

______________ ______________ ______________

______________ ______________ ______________

______________ ______________ ______________

3. What utensils do you need to make oatmeal cookies? Write them in the blanks.

______________ ______________ ______________

______________ ______________ ______________

4. How many cookies does this recipe make? ______________

5. How hot should the oven be? ______________

6. How much milk do you use in this recipe? ______________

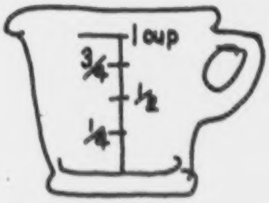
7. Do you cook the oatmeal before you put it in the cookies? ______________

8. What kind of sugar do you use in these cookies? ______________

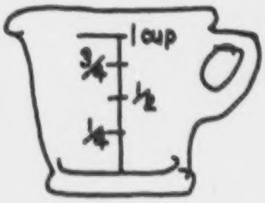
9. How much nutmeg do you use in these cookies? ______________

10. How long do you bake the cookies? ______________

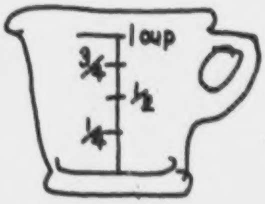
Here are three measuring cups. One is for flour. One is for vegetable oil, and one is for chopped nuts. Use these pictures to show how much of each ingredient is used in oatmeal cookies. Draw a line through each cup at the right mark. Then color the cup below the line you have made.



flour



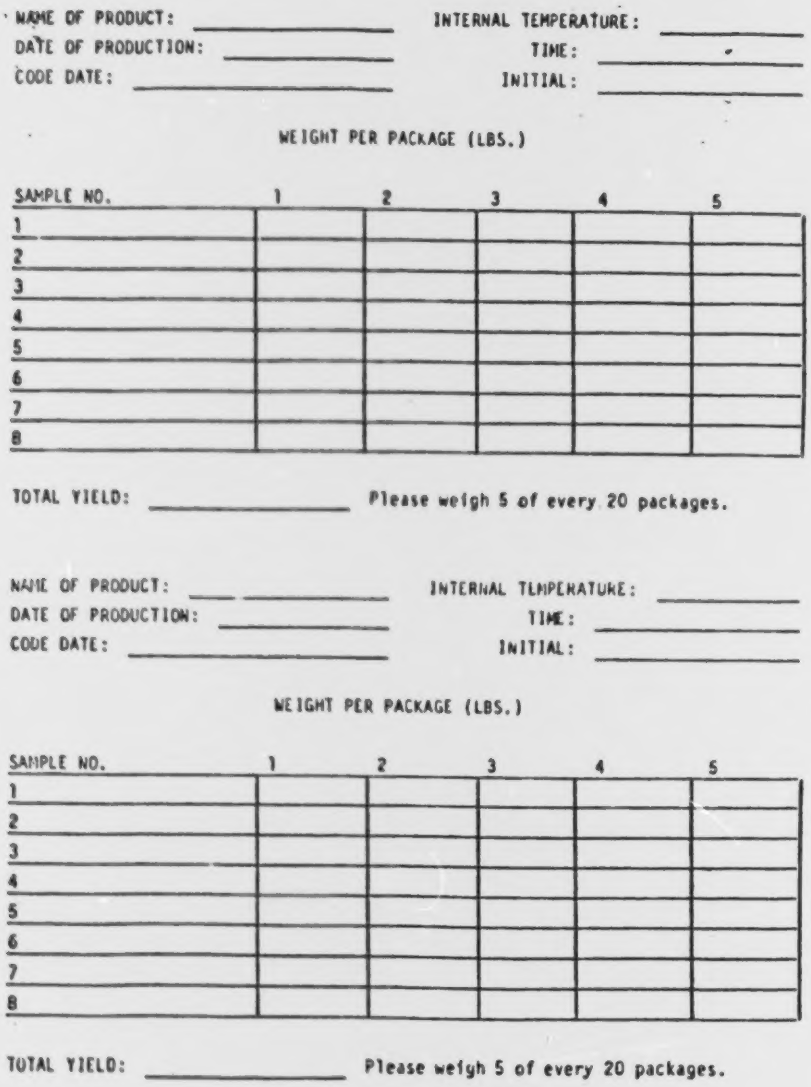
vegetable oil



chopped nuts

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

INVENTORY



NAME OF PRODUCT: ______________ INTERNAL TEMPERATURE: ______________
DATE OF PRODUCTION: ______________ TIME: ______________
CODE DATE: ______________ INITIAL: ______________

WEIGHT PER PACKAGE (LBS.)

SAMPLE NO.	1	2	3	4	5
1					
2					
3					
4					
5					
6					
7					
8					

TOTAL YIELD: ______________ Please weigh 5 of every 20 packages.

NAME OF PRODUCT: ______________ INTERNAL TEMPERATURE: ______________
DATE OF PRODUCTION: ______________ TIME: ______________
CODE DATE: ______________ INITIAL: ______________

WEIGHT PER PACKAGE (LBS.)

SAMPLE NO.	1	2	3	4	5
1					
2					
3					
4					
5					
6					
7					
8					

TOTAL YIELD: ______________ Please weigh 5 of every 20 packages.

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

WEIGHT CONTROL CHART

Note: Weigh (5) bags for every (20) bags, pump and enter the weight in pounds for each sample starting from left to right.

PRODUCT NAME: ____________ EQPT CAL: ______ PRODUCT NAME: ____________ EQPT CAL: ______

KETTLE NO.: ____ STICK YIELD: ____ ACTUAL YIELD ____ KETTLE NO.: ____ STICK YIELD ____ ACTUAL YIELD ____

CODE DATE: ______ PUMP TEMP ____ CHILL TEMP. ____ CODE DATE: ______ PUMP TEMP ____ CHILL TEMP ____

SAMPLE	1	2	3	4	5	REMARKS	SAMPLE	1	2	3	4	5	REMARKS	
WEIGHT														
WEIGHT														
WEIGHT														
WEIGHT														
.GHT														

PRODUCT NAME: ____________ EQPT CAL: ______ PRODUCT NAME: ____________ EQPT CAL: ______

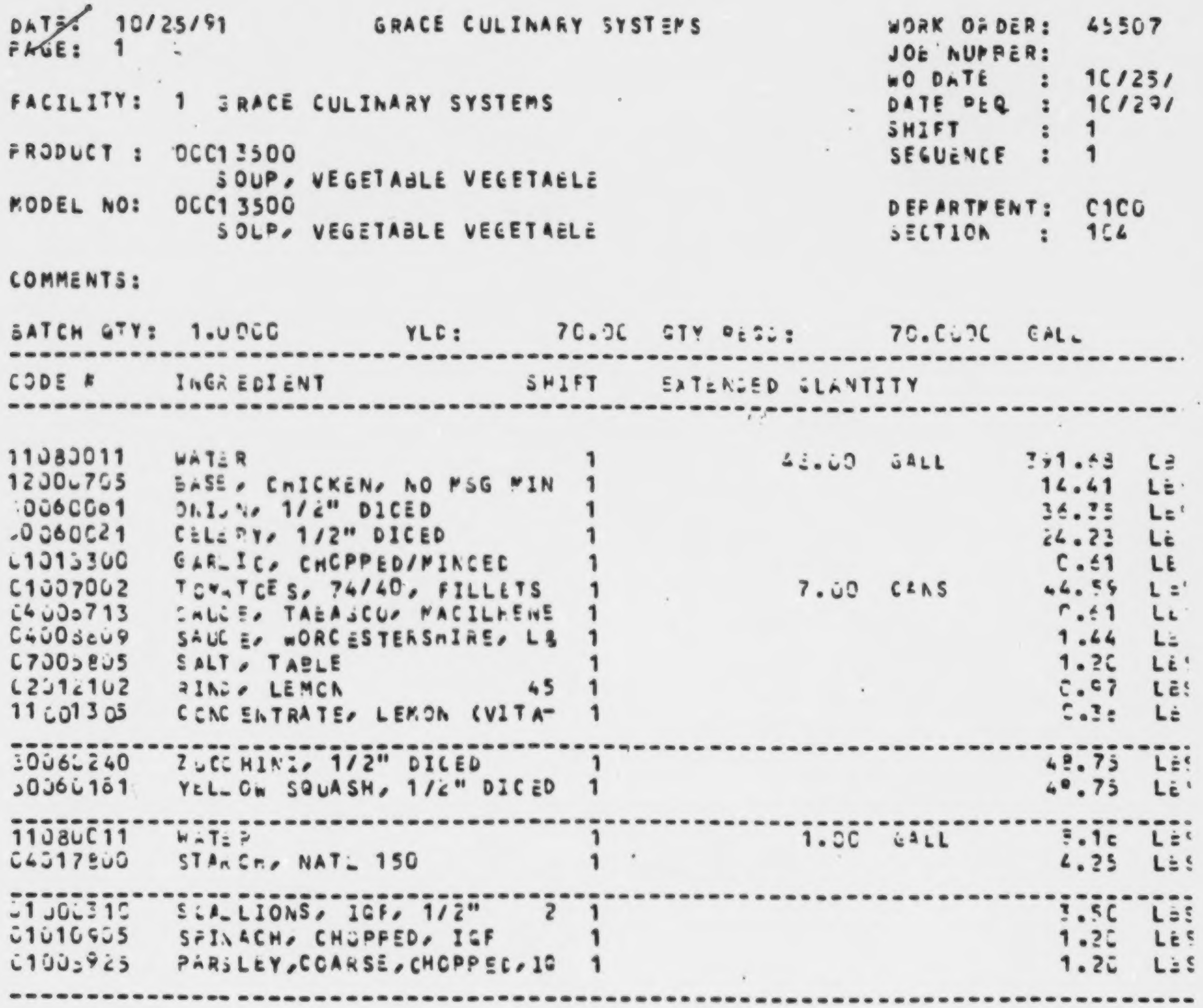
KETTLE NO.: ____ STICK YIELD: ____ ACTUAL YIELD ____ KETTLE NO.: ____ STICK YIELD ____ ACTUAL YIELD ____

CODE DATE: ______ PUMP TEMP ____ CHILL TEMP. ____ CODE DATE: ______ PUMP TEMP ____ CHILL TEMP ____

SAMPLE	1	2	3	4	5	REMARKS	SAMPLE	1	2	3	4	5	REMARKS	
WEIGHT														
WEIGHT														
WEIGHT														
WEIGHT														
WEIGHT														

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

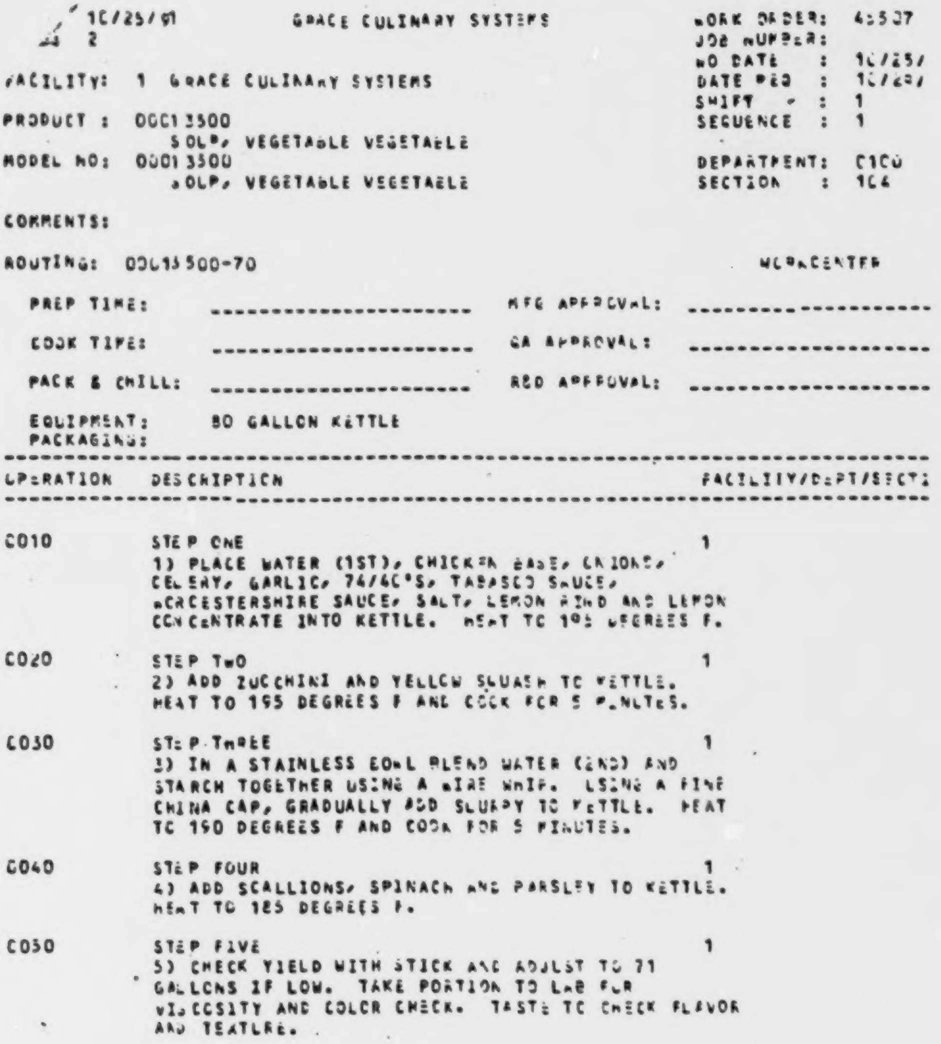
WORK ORDER



```
DATE: 10/25/91          GRACE CULINARY SYSTEMS              WORK ORDER:  45507
PAGE: 1                                                     JOB NUMBER:
                                                            WO DATE    :  10/25/
FACILITY:  1  GRACE CULINARY SYSTEMS                        DATE REQ   :  10/29/
                                                            SHIFT      :  1
PRODUCT :  00013500                                         SEQUENCE   :  1
              SOUP, VEGETABLE VEGETABLE
MODEL NO:  00013500                                         DEPARTMENT:  0100
              SOUP, VEGETABLE VEGETABLE                     SECTION    :  104

COMMENTS:

BATCH QTY:  1.0000        YLD:       70.00  QTY REQD:        70.0000  GALL
-------------------------------------------------------------------------------
CODE #      INGREDIENT                SHIFT   EXTENDED QUANTITY
-------------------------------------------------------------------------------

11080011    WATER                      1               43.00  GALL    391.68  LB
12000705    BASE, CHICKEN, NO MSG MIN  1                               14.41  LB
 0060061    ONION, 1/2" DICED          1                               36.35  LB
 0060021    CELERY, 1/2" DICED         1                               24.23  LB
01013300    GARLIC, CHOPPED/MINCED     1                                0.61  LB
01007002    TOMATOES, 74/40, FILLETS   1                7.00  CANS     44.59  LB
04005713    SAUCE, TABASCO, MACILHENE  1                                0.61  LB
04008609    SAUCE, WORCESTERSHIRE, L&  1                                1.44  LB
07005805    SALT, TABLE                1                                1.20  LB
02012102    RIND, LEMON             45 1                                0.97  LB
11001305    CONCENTRATE, LEMON (VITA-  1                                0.36  LB
-------------------------------------------------------------------------------
30060240    ZUCCHINI, 1/2" DICED       1                               48.75  LB
30060161    YELLOW SQUASH, 1/2" DICED  1                               48.75  LB
-------------------------------------------------------------------------------
11080011    WATER                      1                1.00  GALL      8.16  LB
04017800    STARCH, NATL 150           1                                4.25  LB
-------------------------------------------------------------------------------
01000310    SCALLIONS, IQF, 1/2"     2 1                                3.50  LB
01010905    SPINACH, CHOPPED, IQF      1                                1.20  LB
01005925    PARSLEY,COARSE,CHOPPED,10  1                                1.20  LB
-------------------------------------------------------------------------------
```

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

WORK ORDER

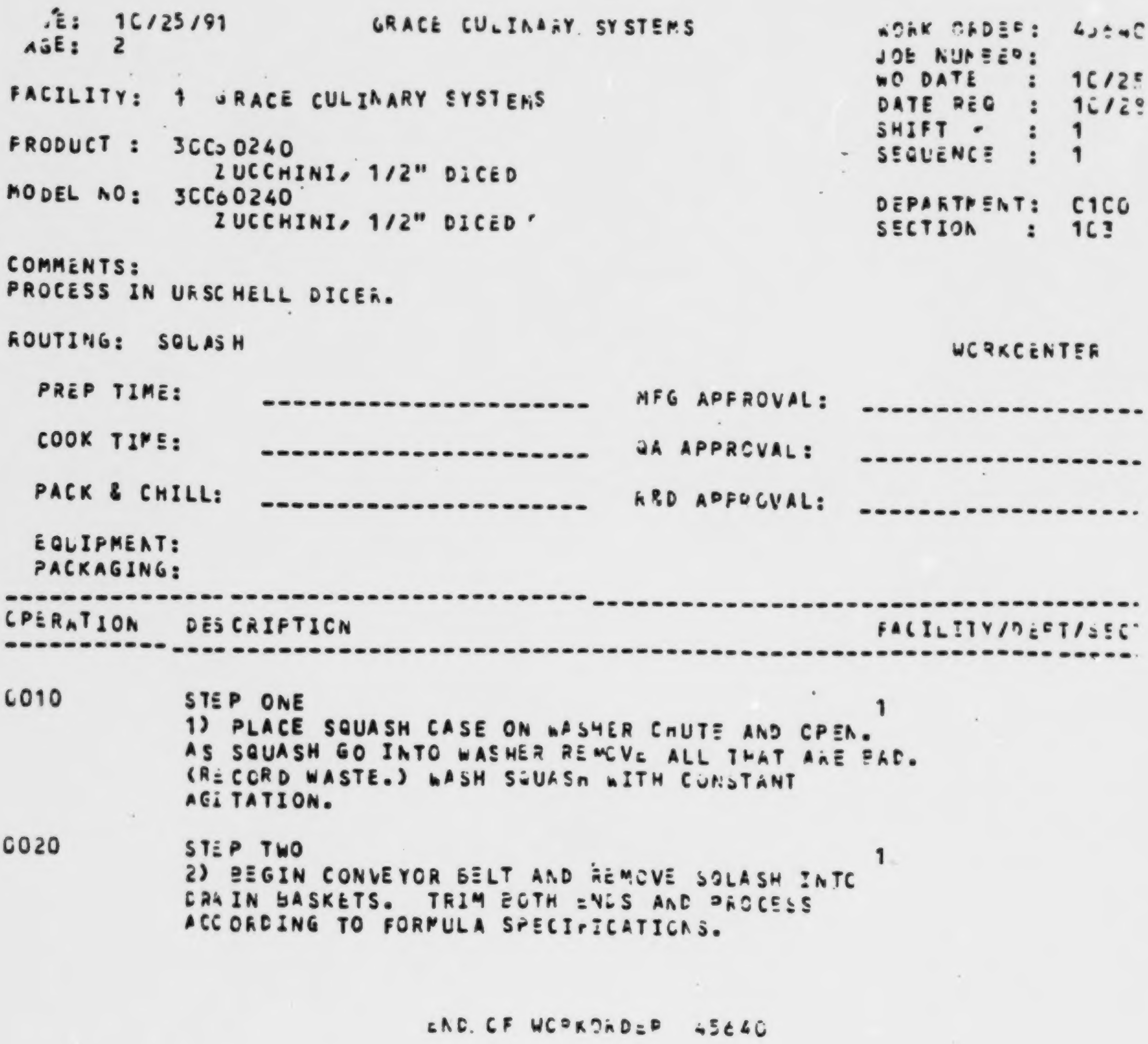


```
   10/25/91          GRACE CULINARY SYSTEMS            WORK ORDER:  43537
   2                                                   JOB NUMBER:
                                                       WO DATE    :  10/25/
FACILITY:  1  GRACE CULINARY SYSTEMS                   DATE REQ   :  10/29/
                                                       SHIFT   #  :  1
PRODUCT :  00013500                                    SEQUENCE   :  1
              SOUP, VEGETABLE VEGETABLE
MODEL NO:  00013500                                    DEPARTMENT:  0100
              SOUP, VEGETABLE VEGETABLE                SECTION   :  104

COMMENTS:

ROUTING:  00013500-70                                      WORKCENTER

  PREP TIME:      ---------------------  MFG APPROVAL:  --------------------

  COOK TIME:      ---------------------  QA APPROVAL:   --------------------

  PACK & CHILL:   ---------------------  R&D APPROVAL:  --------------------

  EQUIPMENT:      80 GALLON KETTLE
  PACKAGING:
----------------------------------------------------------------------------
OPERATION   DESCRIPTION                                    FACILITY/DEPT/SECT:
----------------------------------------------------------------------------

0010        STEP ONE                                       1
            1) PLACE WATER (1ST), CHICKEN BASE, ONIONS,
            CELERY, GARLIC, 74/40'S, TABASCO SAUCE,
            WORCESTERSHIRE SAUCE, SALT, LEMON RIND AND LEMON
            CONCENTRATE INTO KETTLE.  HEAT TO 195 DEGREES F.

0020        STEP TWO                                       1
            2) ADD ZUCCHINI AND YELLOW SQUASH TO KETTLE.
            HEAT TO 195 DEGREES F AND COOK FOR 5 MINUTES.

0030        STEP THREE                                     1
            3) IN A STAINLESS BOWL BLEND WATER (2ND) AND
            STARCH TOGETHER USING A WIRE WHIP.  USING A FINE
            CHINA CAP, GRADUALLY ADD SLURRY TO KETTLE.  HEAT
            TO 190 DEGREES F AND COOK FOR 5 MINUTES.

0040        STEP FOUR                                      1
            4) ADD SCALLIONS, SPINACH AND PARSLEY TO KETTLE.
            HEAT TO 185 DEGREES F.

0050        STEP FIVE                                      1
            5) CHECK YIELD WITH STICK AND ADJUST TO 71
            GALLONS IF LOW.  TAKE PORTION TO LAB FOR
            VISCOSITY AND COLOR CHECK.  TASTE TO CHECK FLAVOR
            AND TEXTURE.
```

BEST COPY AVAILABLE

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

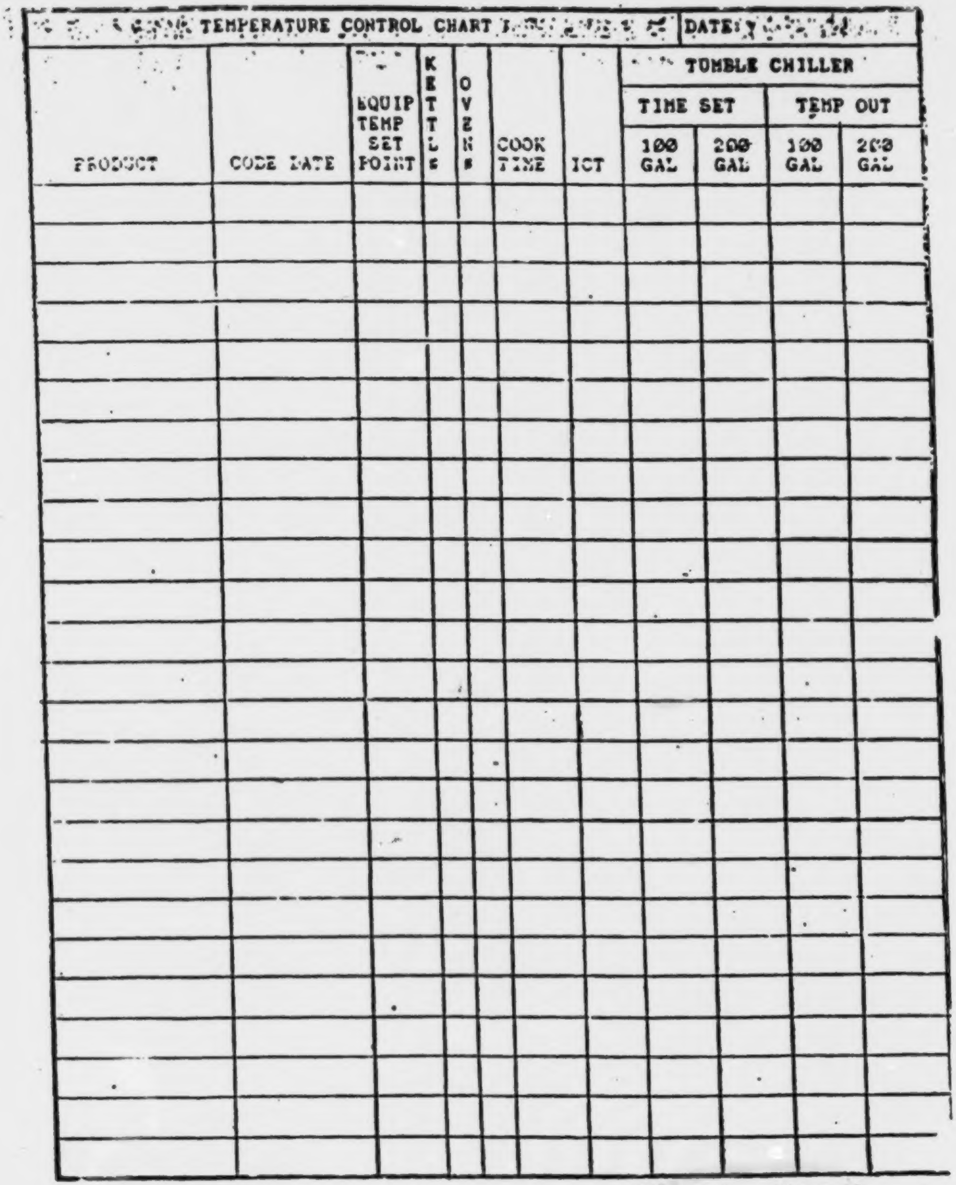
WORK ORDER



```
 E:  10/25/91         GRACE CULINARY SYSTEMS              WORK ORDER:  45640
AGE:  2                                                   JOB NUMBER:
                                                          WO DATE    :  10/25
FACILITY:  1  GRACE CULINARY SYSTEMS                      DATE REQ   :  10/29
                                                          SHIFT      :  1
PRODUCT :  3CC60240                                       SEQUENCE   :  1
              ZUCCHINI, 1/2" DICED
MODEL NO:  3CC60240                                       DEPARTMENT:  C100
              ZUCCHINI, 1/2" DICED                        SECTION    :  103

COMMENTS:
PROCESS IN URSCHELL DICER.

ROUTING:  SQUASH                                                WORKCENTER

  PREP TIME:      ----------------------  MFG APPROVAL:  -------------------

  COOK TIME:      ----------------------  QA APPROVAL:   -------------------

  PACK & CHILL:   ----------------------  R&D APPROVAL:  -------------------

  EQUIPMENT:
  PACKAGING:
---------------------------------------------------------------------------
OPERATION   DESCRIPTION                                   FACILITY/DEPT/SEC
---------------------------------------------------------------------------

0010        STEP ONE                                      1
            1) PLACE SQUASH CASE ON WASHER CHUTE AND OPEN.
            AS SQUASH GO INTO WASHER REMOVE ALL THAT ARE BAD.
            (RECORD WASTE.) WASH SQUASH WITH CONSTANT
            AGITATION.

0020        STEP TWO                                      1
            2) BEGIN CONVEYOR BELT AND REMOVE SQUASH INTO
            DRAIN BASKETS.  TRIM BOTH ENDS AND PROCESS
            ACCORDING TO FORMULA SPECIFICATIONS.


                       END OF WORKORDER  45640
```

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

TEMPERATURE CONTROL CHART



TEMPERATURE CONTROL CHART							DATE:			
							TUMBLE CHILLER			
							TIME SET		TEMP OUT	
PRODUCT	CODE DATE	EQUIP TEMP SET POINT	KETTLE #	OVEN #	COOK TIME	ICT	100 GAL	200 GAL	100 GAL	200 GAL

FORM 3 Rev 12/14/89

CASAS Objective 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

CHICKEN CHART

DATE	TYPE OF CHICKEN	NO. OF CHICKEN CASES USED	POUNDS PER CASE	WEIGHT OF INGREDIENTS ADDED:			
				PHOSPHATE	SALT	WATER	GELCARIN

LAUREL RACE COURSE/ESOL

Site: Multipurpose room located in a dormitory of the International Village at Laurel Race Course.

Instructors:
Belinda Elmer - E.S.L.
Luci Holmberg - E.S.L.

Time:
Volunteer
E.S.L. I
Class 1 - May 13, 1991 - August 7, 1991
Monday
1:00 -3:00 PM
Wednesday
4:00 - 6:00 PM

E.S.L. II
Class 2 - May 13, 1991 - August 7, 1991
Monday
4:00 -6:00 PM
Wednesday
1:00 - 3:00 PM

E.S.L. I
Class 3- November 4, 1991 - January 29, 1992
Monday
4:00 -6:00 PM
Wednesday
1:00 - 3:00 PM

E.S.L. II
Class 4 - November 4, 1991 - January 29, 1992
Monday
1:00 -3:00 PM
Wednesday
4:00 - 6:00 PM

E.S.L. I
Class 5- February 3, 1992 - April 6, 1992
Monday
4:00 -6:00 PM
Wednesday
1:00 - 3:00 PM

E.S.L. II
Class 6 - February 3, 1992 - April 6, 1992
Monday
1:00 -3:00 PM
Wednesday
4:00 - 6:00 PM

E.S.L. I & II
Class 7- April 10, 1992 - June 16, 1992
Tuesday and Friday
7:00 - 9:00 PM

Student: Newly immigrated Hispanic employees whose work tasks including walking and grooming horses.

Instructor Summary:

The class met at the race course in the small multi-purpose room which is also used for A.A. meetings, Bible study, etc. Although all are Spanish speakers, slightly different forms of Spanish were spoken.

In one class there were all combinations of non Spanish readers/non English speakers to non Spanish readers/fair English speakers to English readers/speakers and all combinations in between.

A volunteer came in for 2 months to help individuals learn to read.

Students ranged in age from 18 years to 45 years.

Class attendance was encouraged by giving each attendee a "coupon" to redeem for a soda and hot dog at PeeWee's snack bar on the track.

Various people have sent in bags of clothes (especially helpful in winter) which were speedily requisitioned and used. The workers, most of whom came from the warmer climate of Mexico, had no appropriate clothing.

Everyone in the class wanted more than just speaking and reading workplace vocabulary. They wanted to be able to communicate in English. And, they wanted to see every word! We accomplished that goal for many of our students. One of the trainers commented that he saw the difference between "night and day" with a couple of his workers who were in class.

Most class members obtained an Anne Arundel County library card. As a part of class every three weeks the students went to the library. Members discovered books with tapes and easy to read books.

Some members of the class obtained drivers' licenses.

enrolled in an automotive course.

Larry was a substance abuser and many times came to class smelling of alcohol. He had a learning disability in math and would frequently get frustrated with some of the work. The group was very supportive of him and at the end of our sessions he was going to A.A. meetings and was about to earn his one month sobriety token.

"Bones" took advantage of contacts within the class. He would attempt to "con" food coupons, rides home and sometimes money. He only needed a review of his basic skills and talked about taking the GED examination.

Byron was barely able to read, write, or do any math computation above adding or subtracting. He was primarily taught one-on-one by Bob Griffith, the recreation director at the race course. This special attention and "male bonding" was particularly beneficial to Byron.

Our second ten week session added Susan and J.J. to our group. Susan graduated from college in Animal Husbandry and wanted to pursue a career change while J.J. wanted a career in the health field. Both needed to upgrade their skills primarily in math.

Because their workplace tasks were so menial and because they lived such cloistered lives, much of our time together was spent reviewing their basic skills and preparing them for goals they set for themselves. They learned to write business letters, responded to employment ads, practiced job interview techniques, and wrote resumes (two are included). The teachers and students became an extremely close group.

As a result of our encounter, J.J. was actively pursuing a job by sending out her resume, Susan was planning on going to the counselor at the Multi Service Community Center at Bladensburg High School to consider her career options, Byron became a better reader and was using a calculator for math, Francis seems happier and had more self confidence in herself, Bones was still "conning," Larry was on the road to sobriety, and Harold may just go into business for himself.

The Maryland Thoroughbred Horsemen's Association (MTHA) decided to continue the program and contracted for a new class. The basic skills students decided that they wanted to learn to speak Spanish next so that they could learn to communicate with the large Hispanic population at the Racecourse. MTHA contracted for the class and the majority of the students enrolled.

CASAS Objective 4.1.6 - Interpret general work-related vocabulary(e.g. experience, swing shift)

Gait - way a horse moves

Four natural gaits

- walk - four beat gait
- trot - two beat gait
  1. right forefoot and left hindfoot
  2. left forefoot and right hindfoot

     Posting - way to ride a horse while trotting

     1st beat - raise body 2nd beat - down
- cantor - three beat gait, comfortable
  1. one forefoot strikes the ground
  2. other forefoot and opposite hind leg
  3. other hind leg
- gallop - work

Artificial gaits

- pace - used in harness racing
- slow gait - slow four beat
- rack - fast smooth four beat gait
- breezing - fast running

Tools

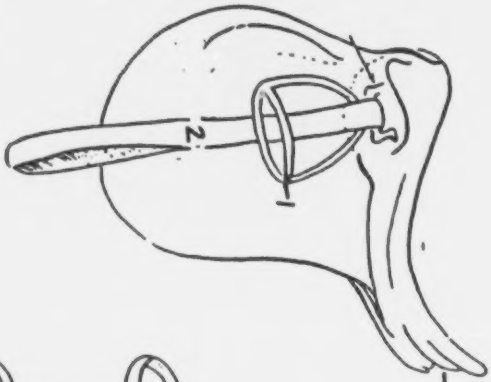
rake
pliers
pitchfork
hammer
shovel
broom
bucket
mop
trough
sponge

Food

hay
alfalfa
sweet feed - mix of crushed oats, corn with protein supplement and molasses
bran mash - 4 qts. wheat bran and hot water plus 1-2 oz. salt

CASAS Objective 4.1.6 - Interpret general work-related vocabulary(e.g. experience,swing shift)

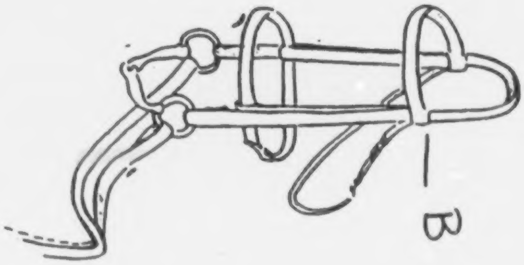
IDENTIFY THE FOLLOWING:



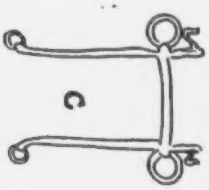
A. ____________

1. ____________

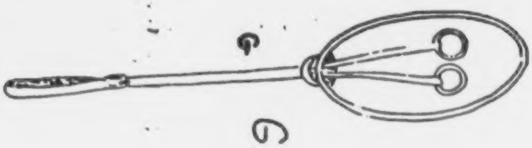
2. ____________



B. ____________



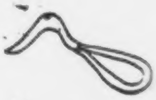
C. ____________



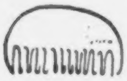
G. ____________

CASAS Objective 4.1.6 - Interpret general work-related vocabulary(e.g. experience,swing shift)

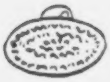
Name the following grooming equipment. Give the use or uses of each tool.



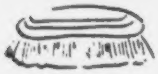
1. ______________________
____



2. ______________________
____



3. ______________________
____



4. ______________________
____

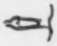
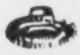
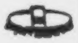
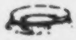
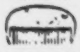
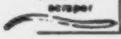
5. ______________________
____

CASAS Objective 4.1.6 - Interpret general work-related vocabulary(e.g. experience,swing shift)

GROOMING EQUIPMENT AND HOW TO USE

TABLE 17-3

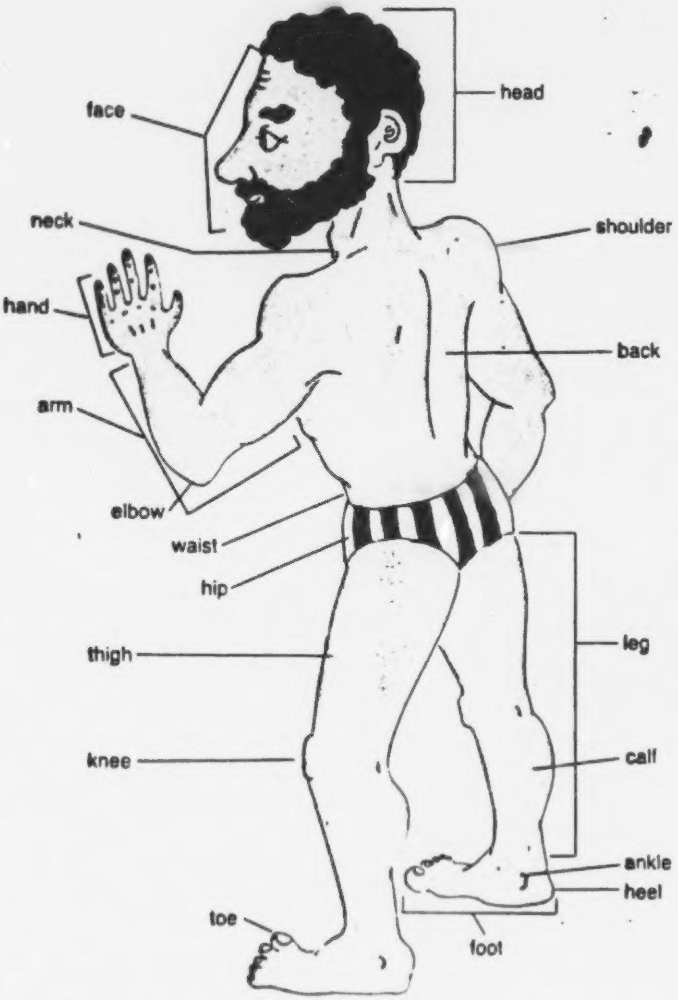
GROOMING EQUIPMENT AND HOW TO USE IT

Article	What It is How to Use It	Used for	Grooming Procedure: How to Do It
Hoof pick 	A metal pick for cleaning the feet	To clean out the feet	To assure that the horse will be groomed thoroughly and that no body parts will be missed, follow a definite order. This may differ according to individual preference, but the following procedure is most common: 1. Clean out the feet—Use the hoof pick. Work from the heel toward the toe. Clean throughly the depressions between the frog and the bars. Inspect for thrush and loose shoes.
Curry comb (rubber or metal) 	Use gently and in small circles, rather than with pressure and in long strokes. Do not use the metal curry comb below the knees or hocks, about the head, or over bony predominences. Nor should it be used on horses that have been clipped recently, or that have a thin coat of hair.	To groom horses that have long thick coats To remove caked mud To loosen matted scurf and dirt in the hair To clean the brush	2. Groom the body—Hold the curry comb in the right hand and the brush in the left hand, and proceed as follows: a. Start with the left side. b. Follow this order: the neck, breast, withers, shoulders, foreleg down to the knee, back, side, belly, croup, and hind legs down to the hock. Then brush from the knee and hock down toward the hoofs. At frequent intervals, clean the dust and hair from the brush with the curry comb, and knock the curry comb against your heel or the back of the brush to free it from dirt. Curry gently, but brush vigorously. Brush the hair in the direction of its natural lay. Brush with care in the regions of the flanks, between the fore and hind legs, at the point of the elbows, and in the fetlocks. After grooming the left side, transfer the brush to the right hand and the curry comb to the left hand, then groom the right side in the same order as described above. 3. Brush the head, comb and brush the mane and tail—Use the body brush on the head. Groom the mane and tail as follows: a. Brush downward, using either the body brush or the dandy brush. b. Clean the tail by: (1) Brushing upward a few strands of hair at a time, or by (2) Picking or separating out a few hairs at a time by hand (3) Occasionally washing with warm water and soap
Body brush 	The body brush is the principal tool used for grooming	To brush the entire body [illegible] light [illegible] from the [illegible]	
Dandy brush 	The dandy brush is made of stiff fiber, usually about 2 inches in length	To remove light dirt from the skin. To brush the mane and tail	
Mane and tail comb 	Use as directed in last column	~~To comb out matted mane and tail~~ To pull out [illegible]	
Sweat scraper 	A metal or wood scraper for removing sweat or water	To remove excess perspiration from heated, wet, and sweating animals	

(Continued)

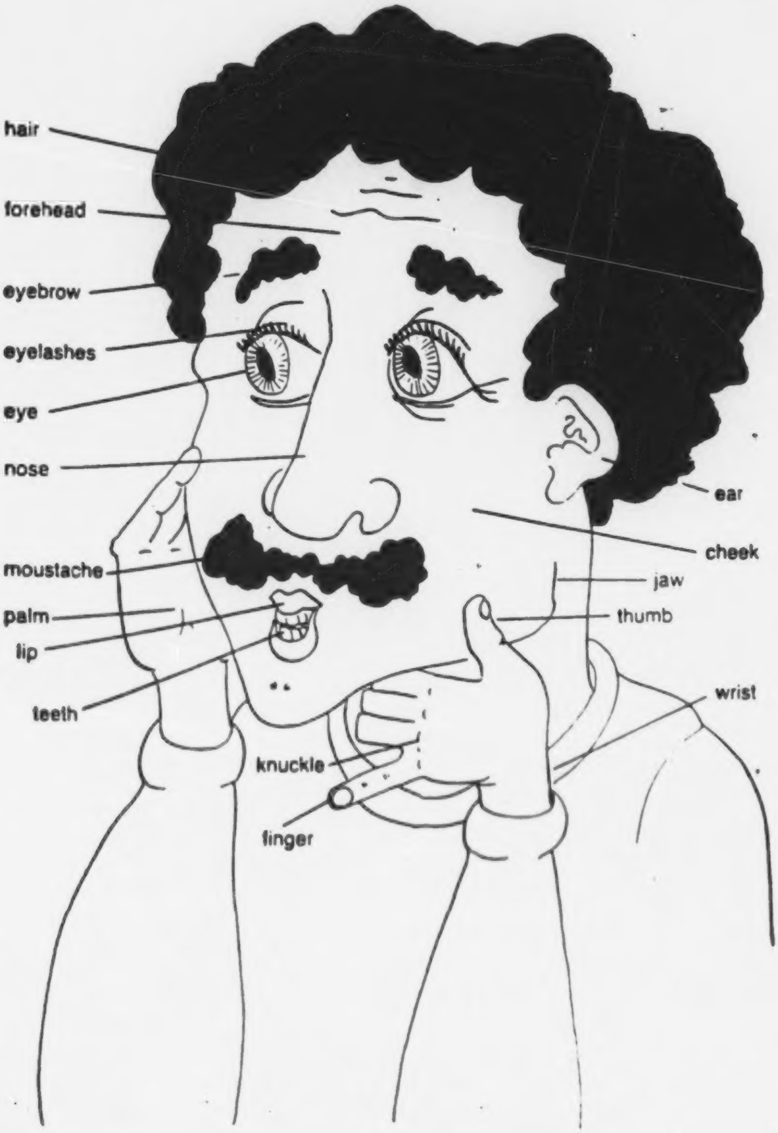
CASAS Objective 3.0 - Recognize pictures or demonstrate aural comprehension associated with health

PARTS OF BODY


head
face
neck
shoulder
hand
back
arm
elbow
waist
hip
leg
thigh
knee
calf
ankle
heel
toe
foot

CASAS Objective 3.0- Recognize pictures or demonstrate aural comprehension associated with health

PARTS OF FACE


hair
forehead
eyebrow
eyelashes
eye
nose
moustache
palm
lip
teeth
ear
cheek
jaw
thumb
wrist
knuckle
finger

CASAS Objective 4.1.2 - Interpret job applications, resumes, and letters of application
CASAS Objective 2.5.6 - Use library resources

LIBRARY CARD APPLICATION

ANNE ARUNDEL COUNTY PUBLIC LIBRARY REGISTRATION FORM

PLEASE PRESENT this form with VALID MD DRIVER'S LICENSE or M.V.A. I.D. showing current address.
PRINT ONE character in each box. SKIP ONE SPACE between requested information.

LAST NAME FIRST NAME (No nicknames) MIDDLE NAME JR.,SR.,etc.

MAILING ADDRESS (Please give number, street, apartment number, P.O. Box #, etc.)

CITY M D ZIP CODE TELEPHONE - BIRTH Month & Day SEX

MARYLAND DRIVER'S LICENSE # ONLY ☐ - ☐☐☐ - ☐☐☐ - ☐☐☐ - ☐☐☐

THE FOLLOWING INFORMATION IS CONFIDENTIAL and is not required to get your library card.
We will use it to better plan your library services.

AGE - Please check one.

- 1 ☐ 0 - 5
- 2 ☐ 6 - 12
- 3 ☐ 13 - 18
- 4 ☐ 19 - 25
- 5 ☐ 26 - 54
- 6 ☐ 55+

EDUCATION - Check block for highest level of education completed.

- 0 ☐ No formal schooling
- 1 ☐ Nursery/Kindergarten
- 2 ☐ Grades 1 - 6
- 3 ☐ Grades 7 - 11
- 4 ☐ High School or Equivalency
- 5 ☐ Technical School, Community College, 1 - 3 years of College
- 6 ☐ 4 years College
- 7 ☐ 5 or more years College (Graduate/Professional School)

THE UNDERSIGNED is responsible for materials borrowed and fines charged. (if under 16, signature of parent, adult responsible for child, or guardian required. Both child and adult must be present.)
FOR YOUR PROTECTION, IT IS NOT ADVISABLE TO LEND YOUR LIBRARY CARD.

SIGNATURE ______________________________ DATE ______________

Relation to child: ☐ Mother ☐ Father ☐ Other ______________

FOR LIBRARY USE ONLY

PZ# ______________ APATID ☐☐☐☐☐☐☐☐ ☐ New Registration ☐ Rename

SCAT ☐☐☐☐ M/F G A E STATUS ☐ N S L C IDENTIFICATION: ☐ Driver's License ☐ Mail ☐ Not Available

ADDATA ______________________________ OLD PZ# ______________

STAFF INITIALS ________ AGENCY MDC INPUT BY ______ VIDEO PZ# ______________

90F119

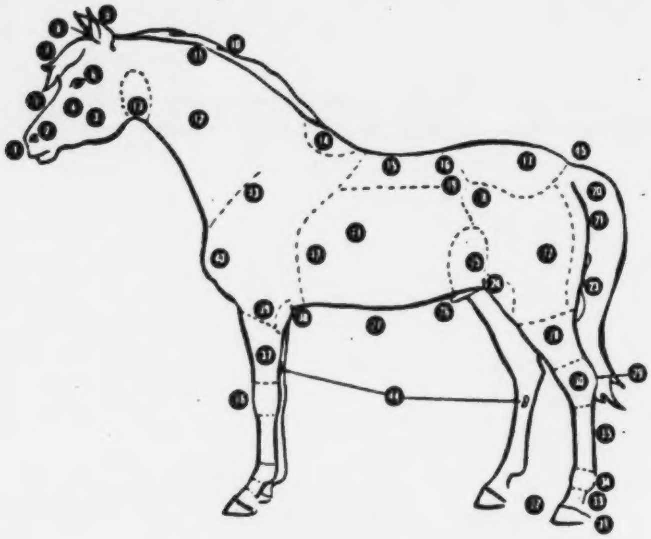
CASAS Objective 2.3.1 - Interpret clock time
CASAS Objective 2.3.2 - Identify the months of the year and the days of the week

LIBRARY HOUR

BRANCHES	HOURS
ANNAPOLIS - 1410 West St., 222-1750	M - Th 9 - 9; F,S 9 - 5; Sun 1 - 5
BROADNECK - 1275 Green Holly Dr., 222-1905	M,T,Th 1 - 9; W,S 9 - 5; F 1 - 5
BROOKLYN PARK - 1 East 11th Ave. off Ritchie Hwy., 222-6260	M,T,Th 1 - 9; W,S 9 - 5; F 1 - 5
CARE-A-VAN - 1010 Eastway, Glen Burnie, 222-6270	Call for Delivery
CROFTON - 1657 Crofton Centre, 222-7915 or (301)261-3000	M - Th 9 - 9; F,S 9 - 5; Sun 1 - 5
EASTPORT-ANNAPOLIS NECK - 269 Hillsmere Dr., 222-1770, TDD 263-1366	M,T,Th 1 - 9; W,S 9 - 5; F 1 - 5
EDGEWATER - 25 Stepneys Lane, 222-1538	M,T,Th 1 - 9; W,S 9 - 5; F 1 - 5
LINTHICUM - 400 Shipley Rd., 222-6265	M,T,Th 1 - 9; W,S 9 - 5; F 1 - 5
MARYLAND CITY - 3421-23 Ft. Meade Rd. (Rt. 198), (301)725-2390	M,T,Th 1 - 9; W,S 9 - 5; F 1 - 5
NORTH COUNTY - 1010 Eastway, Glen Burnie, 222-6270, TDD 787-0236	M - Th 9 - 9; F,S 9 - 5; Sun 1 - 5
ODENTON - 1270 Odenton Rd., 222-6277	M,T,Th 1 - 9; W,S 9 - 5; F 1 - 5
PROVINCES - 2624 Annapolis Rd. (Rt 175), 222-6280	M,T,Th 1 - 9; W,S 9 - 5; F 1 - 5
RIVIERA BEACH - 1130 Duvall Hwy., 222-628	M,T,Th 1 - 9; W,S 9 - 5; F 1 - 5
SEVERNA PARK - 45 McKinsey Rd., 222-6290	M - Th 9 - 9; F,S 9 - 5; Sun 1 - 5
SOUTH COUNTY - 5910 Deale-Churchton Rd., Deale, 222-1925 or 867-4164	M,T,Th 1 - 9; W,S 9 - 5; F 1 - 5

CASAS Objective 4.1.6 - Interpret general work-related vocabulary (e.g., experience, swing shift)

PARTS OF A HORSE



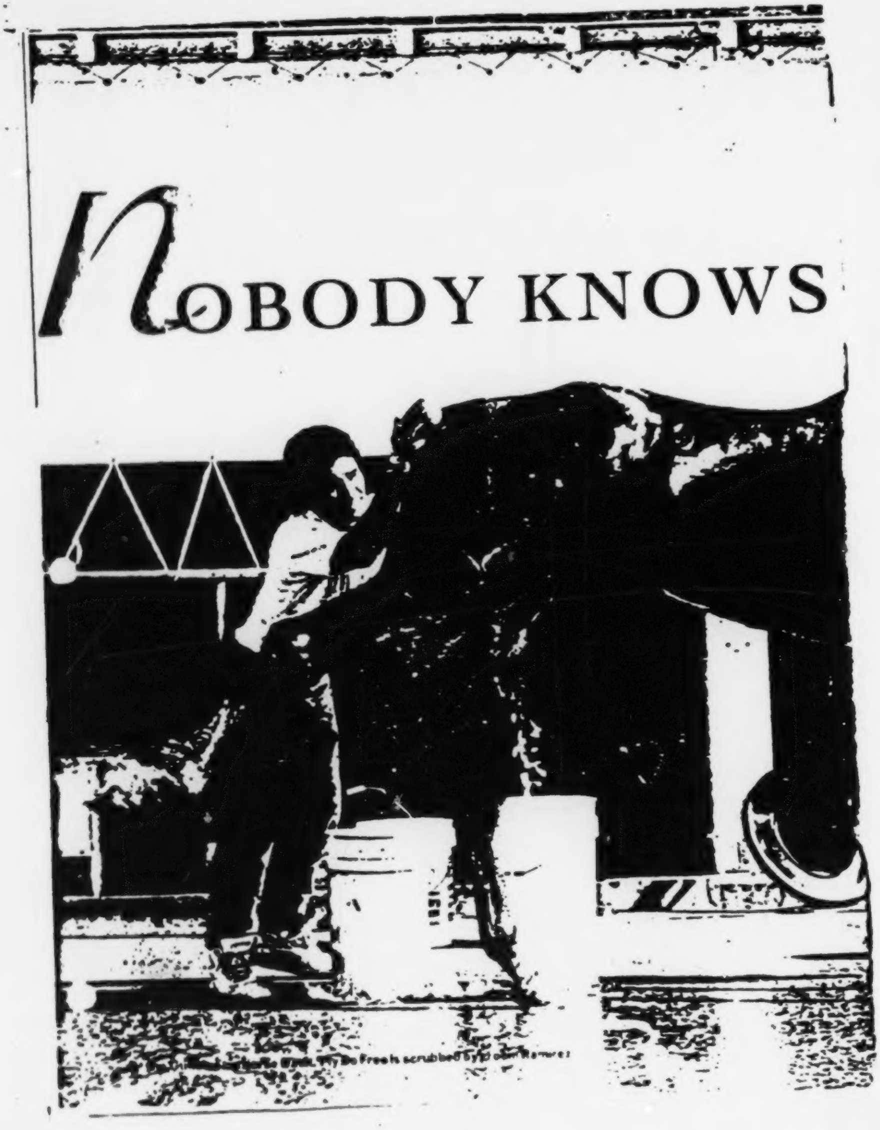
POINTS OF THE HORSE

1. Muzzle
2. Nostril
3. Jaw
4. Cheek
5. Face
6. Eye
7. Forehead and forelock
8. Poll
9. Ear
10. Mane
11. Crest
12. Neck
13. Throatlatch or throttle
14. Withers
15. Back
16. Loin
17. Croup
18. Hip
19. Coupling
20. Tail
21. Point of buttocks
22. Thigh
23. Quarter
24. Stifle
25. Flank
26. Sheath
27. Underline
28. Gaskin
29. Point of hock
30. Hock
31. Heel or foot
32. Coronet
33. Pastern heel
34. Fetlock ankle
35. Cannon
36. Knee
37. Forearm
38. Point of elbow
39. Arm
40. Point of shoulder
41. Ribs
42. Heart girth
43. Shoulder
44. Chestnuts
45. Dock

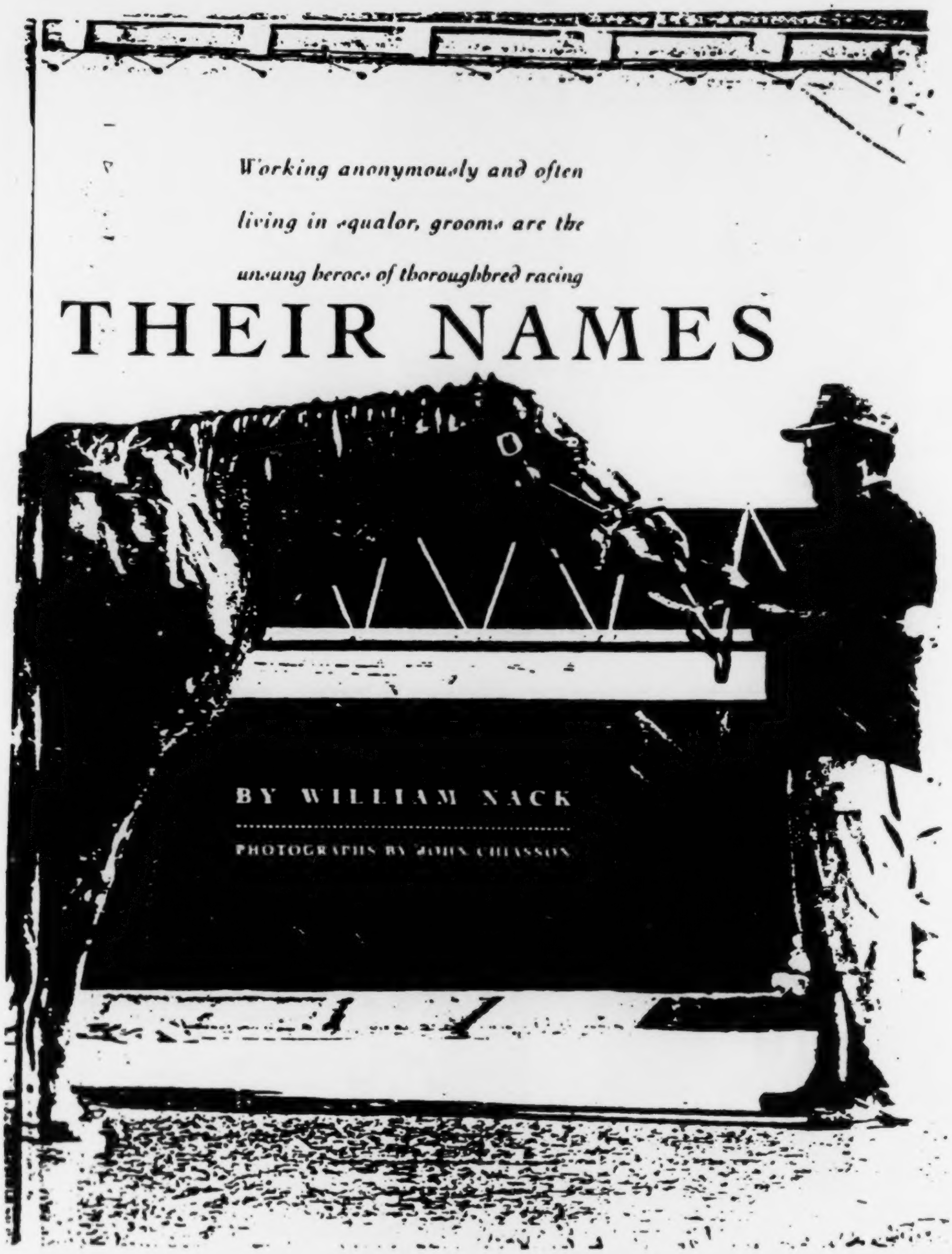
CASAS Objective 2.7.2 - Interpret information about ethnic groups, cultural groups, and language groups

CASAS Objective 2.7.5 - Interpret literary materials such as poetry and literature

The article on the following pages was discussed in class. This article was about the working conditions of our students.



NOBODY KNOWS

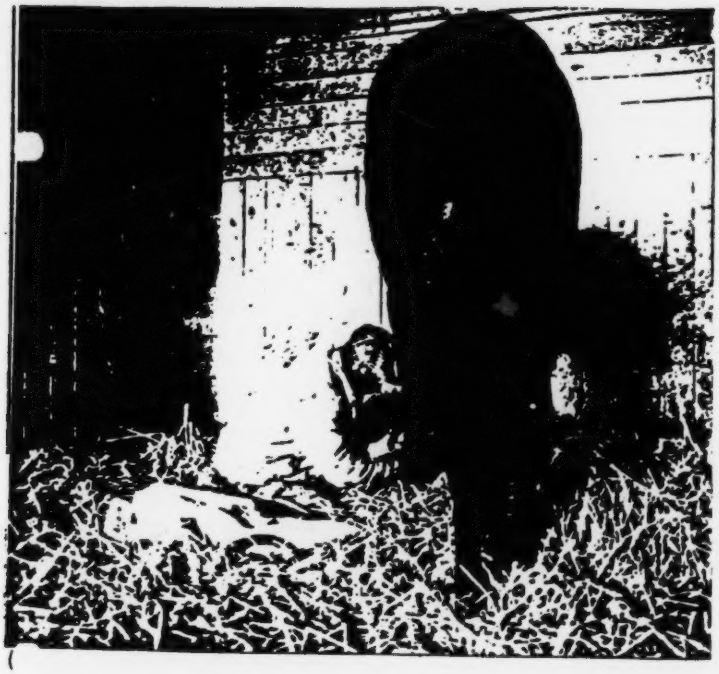


Working anonymously and often living in squalor, grooms are the unsung heroes of thoroughbred racing

THEIR NAMES

BY WILLIAM NACK

PHOTOGRAPHS BY JOHN CHIASSON



Only way that horses will win is if you sit there and spend time with 'em. Show 'em that you're tryin' to help 'em. Love 'em. Talk to 'em. Get to know 'em. Now that's what you gotta do. You love 'em, and they'll love you, too. People might call me crazy but that's the way it is. I been on the racetrack 34 years and I aint ever gonna give up. I think they'll take me to my grave with a pitchfork in my hand and a rub rag in my back pocket. — EDWARD SWEAT, GROOM

BEN STUBBS STRETCHED HIS neck over the rail by the winner's circle, adjusted the blue wool hat on his head and squinted up the homestretch toward the starting gate. A *Hound of the Baskervilles* fog had clung all day to Laurel Race Course, obscuring all but the late stretch runs, and now the horses in the 10th race were dancing like shadows in the distance, looking ghostlike in their gallops to the gate.

Stubbs flipped his cigarette into the mud of the racetrack and stomped his duck boots in the cold. It was almost 4:15 p.m. on Dec. 29, and the seven horses were nearing the starting gate for the $100,000 Congressional Handicap, a 1⅛-mile charge along the dead rail of winter racing in Maryland. It had snowed the day before, turning the racetrack into mire, but 12,474 horseplayers had shown up and were betting more than $250,000 on the Congressional alone, making Runaway Stream the tepid favorite at $2.40 to $1. Now the seven horses' grooms, who had walked their charges from the barn to the paddock for saddling, were gathering in small crowds near the winner's circle. Stubbs, 47, a groom for 28 years, stood waiting with the chain and leather lead shank in his hand.

He looked up the racetrack. "Can't see much," he said. Stubbs was looking for his horse, Chas' Whim, the bettors' third choice in the Congressional at nearly 4-1. The 3-year-old chestnut gelding had lately emerged

Sweat, here rubbing for trainer Richard DeStasio at Belmont Park, won his second Kentucky Derby and a Triple Crown with Secretariat (left) in 1973.

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Stubbs's reward for mucking out stalls at Laurel is a little affection from his horses, barely enough money to support his family, and quarters scarcely better than a barn.

as one of the most popular runners on the Maryland circuit. "One of the best horses I ever put my hands on," Stubbs said as the horses loaded into the gate. "He can *run*, and he can run on anything—grass, dirt, mud like this. No matter. Calm as a lamb, too. A real nice horse."

At stake for Stubbs was $600, or 1% of the Congressional winner's share of $60,000—the usual fee that trainers pay their grooms. To be sure, grooms have more than money on the line when their horses run, more to hope for than that extra stake on payday. No one on the racetrack—neither the owners, trainers or jockeys, nor the assorted hustlers, rakes or handicappers—is nearly as close to the animals as their grooms, or "swipes," that bivouacked army of men and women who make and remake the straw beds in the horses' stalls, who wake up at early light to care for the animals, who turn off the lights at night for them, who scold and [illegible] and worry them. Who brush, rub, massage, bathe, hose, sponge, feed, water [illegible] them. Who pick their feet [illegible]. Who mix their [illegible] the racks with hay. Who dose their feed with thick liquid vitamin mix, pouring it on the oats like syrup over pancakes. Who take the horses' temperatures, paint their feet, feel for hot spots in their ankles and knees. Who swab their legs with poultices of medicated mud and stand the horses for hours in tubs of ice. Who lead them to the wars and back.

"The groom is the life of the horse," says Hall of Fame trainer Sylvester Veitch of New York. "A good groom will make your horse [illegible] In the good ones it's a natural instinct. You gotta love the horse. You gotta love the game."

Along shedrows from Laurel to Gulfstream Park in Florida to Santa Anita Park in California, the rivalries among grooms are often keen. Most grooms rub three horses apiece, four at times, and [illegible] grooms' life. So in turn the horses are [illegible] for them [illegible]

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A groom's work is mostly in the hands: washing horses' legs, wrapping them in bandages secured with safety pins and holding the lead shank on walks.

ble area, Stubbs passed astern of Jim Spears, the groom of Reputed Testamony, a 6-1 shot in the race, and Spears hollered "I'm gonna kick your butt on Saturday!"

"You ain't got a chance!" Stubbs yelled back.

The next day, with ice coating the branches of trees and with snow gusting, groom Willie Kee was sitting in a small room in the detention barn on the backstretch, watching the races with other stable hands, including Sauni Jones, a hotwalker from Chas' Whim's barn. "Well, I'm gonna win the Congressional tomorrow," Kee announced loudly. "I'll be laughin' at 'em all in the winner's circle." Kee was the groom of Learned Jake, who had placed in his last two starts at Laurel, both stakes.

"I got the fittest horse, and the race is set up for me," crowed Kee. "If the track don't dry out, they'll all scratch out, and there's plenty of speed and I come from off the pace."

"Y'all will be second tomorrow," Jones said. "Chas will win."

"Chas won't be on the board tomorrow," said Kee. "The speed will finish him."

Jones laughed. "Horse for horse, I bet you," she said.

"Horse against horse," Kee said. "How much?"

"Bet you three cases of soda," she said. "Jake got to learn not to mess with Chas."

They all learned not to mess with Chas. Bounding from the gate, the filly Seattle Dawn hooked up with Chas' Whim on the lead, and the two were head and head as they raced through the stretch the first time. Learned Jake fell back to sixth. As the horses disappeared into the fog on the clubhouse turn, Stubbs gripped the railing.

"Can you see anything?" he asked. "You see my horse?"

They raced unseen into the backstretch where Chas' Whim's jockey, Allen Stacy, let him roll past the filly to the lead. "How can my horse see?" asked Stubbs. In fact the jockeys had about 200 yards of visibility. They swept into the far turn and [illegible] the bend for home. [illegible] dashing across an English moor, and Chas was in front by three, with Stacy in red silks setting him down.

"Come on with him, Allen!" yelled Stubbs.

The chestnut raced on the lead through the stretch, finally winning by a length and three-quarters over Jet Stream and 2⅓ lengths over Reputed Testamony. The timer flashed a final time of 2:01⅘, only a tick off the track's 10-furlong record. Stubbs leapt for the winner's circle. "Hey, I knew they weren't going to beat him today," he said. "I knew it!"

On the racetrack in front of the circle, Stubbs spotted his friendly antagonist, Spears, and pointed to him. "Turn your horse out to pasture," said Stubbs. "I told you. Give him a break. He needs a rest!"

Stubbs waited for Stacy to gallop Chas to the circle. "This is the *best* horse I ever had my hands on," Stubbs said. He made a thumbs-up gesture as Stacy approached. Then Stubbs led Chas' Whim into the circle to get their picture taken, and finally he walked the gelding down the racetrack toward the barns. The chestnut, his legs and belly speckled with mud, his eyes wide and nostrils flaring, strode off with his groom. Stubbs slapped the horse on his neck and whispered into his ear: "It's all right, you did good. . . . It's all over now, you win again, it's all right now."

Stubbs smiled and nodded at the grandstand fans who yelled to him. Grooms shouted, "Attaway, Stump!" A pony girl reached out a hand and gave Stubbs a high five. "Wire to wire!" she cried. "Way to go."

The groom angled his horse through a gap in the fence and toward the barn area, keeping up a constant patter in Chas's left ear, which stood up and twirled as he listened. "You don't belong here," Stubbs told him. "You're too good for these horses here! Hear me? You should be in California, or New York. You're a *good* horse. You gotta go where the money is."

The man and his horse strode triumphantly into the stable area. A handful of stable workers, most of them grooms, applauded as the two swept past, heading for the testing barn. Across the road from the barn, Kee was already giving Learned Jake a bath and wincing at the sound of

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Jones's voice. Jake had finished next to last.

"You didn't beat but one horse," Jones told him. "I love free sodas. They taste so good when they are free. That's three cases. Remember? I want Coke, orange and Mountain Dew."

"Awright," said Kee. "But I don't understand it. He just didn't run today."

[illegible] Stubbs, Kee saw the chance to escape Jones. He reached out his hand.

"Congratulations," Kee said. "You got a hell of a horse there, a hell of a horse."

For a moment Benjamin Stubbs was a hero in the place where he lives—a man of the hour in the [illegible] of the backstretch [illegible] world of muck sacks and haystacks [illegible] oat mash and sweet feed, of cramped rooms with [illegible] and TV sets with rabbit ears. Stubbs was the groom of Chas. White [illegible] at Laurel.

Like [illegible] trainers, racetrack swipes [illegible] [illegible]

know you're the groom of a horse who won a $[illegible] race? To know you done your job well. To give someone a piece of your mind. My horse is better than your horse. That's what I said today. That's what I like. It's the racetrack tradition."

Surely no job on the racetrack has spawned a more colorful, memorable parade of characters than that of the backstretch groom. Their nicknames reveal them: Liquor Ben and Never Sweat Hays and Silly Willie, Hard Times, who made a living betting easy marks that [illegible] the broader the better. The old Calumet Farm groom Slow 'n' Easy, for whom the world turned at half speed, and the late Eat-Early Dad, teller of tall tales, and Kitchen Sittin' Smitty, who hung out at racetrack kitchens looking for work. [illegible] still sittin', would [illegible] right now.

There was [illegible] and there was [illegible] the time [illegible] glittering [illegible] Talk [illegible] Sweet [illegible] Pete

South Carolina Jimmy is used to getting nuzzles and doe-eyed looks from his charges at Gulfstream Park.

And there was Sloan (Duck Butter) Price, so nicknamed, he once explained, after he successfully ducked a flying stick of butter in a racetrack cafeteria fight.

The names are tamer nowadays. Down at Gulfstream Park, working side by side, are South Carolina Jimmy and his cousin, Willie Green. "Bill for short," says Willie. Times have changed too. In the first half of this century most of the grooms, like Slow 'n' Easy and Duck Butter, were black. Many of them came to the racetrack from horse farms in Kentucky, South Carolina and Virginia, and they traveled like vagabonds from track to farm to track. The most celebrated groom in the first half of the 20th century was Will Harbut, the black handler of the immortal Man o' War, the greatest American racehorse of his day. Thousands of people went to visit the stallion each year at Faraway Farm in Lexington, Ky., where Harbut would stand in front of the horse's stall and regale his rapt audiences with stories of Man o' War's exploits, sometimes ending with a theatrical flourish: "He beat all de hosses, and there was nothin' left for him to do. He was de mostest hoss. Stand still, Red."

Not 20 years after Harbut and Man o' War died, a month apart, in 1947, the era of the predominantly black groom was disappearing as rural Southern blacks migrated to the industrial North and sought higher-paying union jobs in factories. Racetracks began opening jobs in their stable areas to women—female grooms or exercise riders had been virtually unheard of since the dawn of American racing—who were joined by an increasing number of Latin Americans, particularly Mexicans at California racetracks and Cubans and Puerto Ricans at tracks in Florida.

Today there are female grooms, pitchforks in hand, mucking stalls at all the venues of the sport. They come from everywhere, from farms and towns, often with years of experience in riding and grooming pleasure horses. Anita Lichtenberg, 23, of Mankato, Minn., began riding as a child, broke thoroughbred yearlings as a teenager and spent a summer working as a groom at Canterbury Downs outside of Minneapolis. That experience with racehorses changed her life. To the dismay of her father, a retired Mankato policeman—"My

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father wanted me to go to college," Lichtenberg says—she chose to make a life for herself on the racetrack as a full-time groom. This winter, at Belmont Park in New York, she was up every working day at 4:45 a.m. and off to Billy Mott's barn, coffee in hand, to begin the care and handling of three of his expensive fur coats. She takes home $230 a week.

It is not soft work, lifting muck tubs and carrying them to the manure bin, slinging buckets of water from the spigots to the stalls, hauling bales and forkfuls of hay and straw, getting stepped on and pushed around by 1,000-pound animals in their stalls. "But I enjoy my job," Lichtenberg says. "I like women at the track. I think we're more conscientious about taking care of a horse; we pay more attention to detail. It's kind of like taking care of kids. You gotta know when to spank them and when to school them. The racetrack gets in your blood. People try to leave, but it seems like they always come back. It pulls you, like an addiction."

Nothing pulls like the yanqui dollar in Mexico, and the opportunity to earn more than $1,000 a month—and, with luck, a good deal more than that—has filled the sheds of American racetracks with grooms from south of the Rio Grande. Many of the Mexican grooms were farmers back home, or farmers' sons who were raised around horses. Numerous trainers say the Mexican grooms bring to their jobs a practiced skill with horses, a feel for the animals. So it comes as no surprise that Mexicans are handling several of the most prominent 3-year-old horses this year, including Fly So Free, an early favorite for the Kentucky Derby who ran a disappointing fifth at Churchill Downs, and a striking California colt named Excavate, a son of Mr. Prospector.

Francisco Ramirez, 20, the groom of Fly So Free, grew up the fourth of nine children of a farmer in Zamora, in central Mexico, where horses were a part of his early years. "I think I was born on a horse," Ramirez says. "I was raised with them. I loved them ever since I was a young boy." At 16, he followed his older brothers north to racetracks in the U.S., first to New Jersey and finally to New York trainer Scotty Schulhofer's barn. Last August, seeing enough in Ramirez's horsemanship to justify the ultimate vote of confidence, Schulhofer made him the groom of Fly So Free, the 1990 2-year-old champion. "He is something I love, like a car," Ramirez says of the colt. "I take care of him like he is family."

Early in February, Francisco Solis of Guadalupe, Mexico, stepped into stall 24 of trainer Charles Whittingham's barn at Santa Anita, took Excavate by his halter and turned the big colt in a half circle. "A good-looking horse, no? Strong, very strong," Solis said. "But very kind. And the coat! You ought to see it when the sunshine hits it. His coat is like a mirror."

"You are always hopin' that every horse you rub will be the top one," says Green. "I lay down at night and I think about my horses. How can I make them better? Oh, I'd love to win the Derby. I think about it every time I get a young horse. I never even been to the Derby. Can you imagine walkin' the Kentucky Derby winner back to the barn? It would be like walkin' to heaven and back."

Clay led Sunday Silence to victories in the Derby, the Preakness and the Breeders' Cup Classic in 1989.

Eddie Sweat has been there and back, not once but twice, and the memories still drive him at age 52. In 1973, Sweat achieved a kind of celebrity unmatched since the days of Will Harbut. He rubbed the 1972 Derby winner, Riva Ridge, and the next year came back to Churchill Downs with Secretariat. That first Saturday in May 1973, Sweat became the first groom in memory to have rubbed back-to-back Kentucky Derby winners, and five weeks later he became the first in 25 years to burnish a Triple Crown champion. He nearly won a third Derby with Chief's Crown, who finished third in 1985. Today, Sweat is like the old fighter who wants one more dance in the lights.

"Just one more Derby," he says, "and I'll be the happiest little ol' black man you ever want to see. Just one more Derby. That's all. Just one."

Solis, 35, has been there too. He was raised riding horses, learning at the knee of his caballero grandfather. But nothing prepared him for the shock he got in 1982, shortly after he had bridled a 21-1 long shot, Gato Del Sol, and walked him to the paddock for the Derby. Solis watched by the outside rail as the field came charging past the stands the first time, with Gato floundering, 19th and last. "It was like a dream," says Solis. "I was at the rail with all the other grooms, and when he came by, all the dirt was flying up in his face, and I remember thinking, as his groom, *He hasn't run a quarter of a mile and already he's dirty.* I couldn't see him because of the infield crowd, and then I heard him called fifth at the far turn. They came into the stretch, and I could see him. I could see the silks. He was running toward me, on the lead. I had both fingers crossed and I was praying. There are some things you remember forever. For me, the day I graduated from high school. And my first home run in Little League in Mexico—it hit the roof of a two-story house, right center. And the stretch run of the Derby. They are things you remember forever."

Off to the side of Excavate's stall, Solis is paring wedges from a large carrot and adding them to the colt's tub of oats and sweet feed. The horse comes wide-eyed to his door, sniffing, looking for the groom. "After you taste it once," Solis says of his Derby victory, "you want to taste it again."

Of course, tasting from that julep cup has been reserved for only a slim crowd of racetrack swipes who woke up one morning to find themselves, through the whims of chance, leading the racehorse of the moment to the horse race of the year. Most grooms have never made it to the paddock for the Derby and never will, and for many of them nothing will ever taste sweeter than coffee and doughnuts at 6 a.m. As folksy as he made his corner of the world seem with his homespun dialect and charm, Harbut's existence was far from idyllic. Back in the 1920s, says Rodger Gill, trainer of Chas' Whim, "grooms were like slaves. They slept in a stall. The privy was outside, and they sat on a rail to go to the bathroom. They were abused by work. They got up at 3 a.m., and the stalls were mucked out and the horses brushed off before the trainer ever stepped into the barn."

At many racetracks today, the living conditions for grooms and hotwalkers are not much better. In New York, the cradle of American racing and the citadel of the sport's eastern establishment, some of the housing for backstretch workers is a scandal. In May 1989, Charles Clay, the California-based groom of Kentucky Derby and Preakness winner Sunday Silence, accompanied his colt to Belmont Park to begin training for the Belmont Stakes in his quest to become the 12th Triple Crown winner. The colt was racing's reigning star, so he ended up in a barn with far cleaner quarters than the racetrack gave to Clay. The groom found himself in a room that would have shamed a Bronx slumlord.

"Filthiest place to live I ever saw in my life," Clay said. "First thing I did is, I cleaned the whole place with Clorox cleanser. Scrubbed it down. Then I set off two roach bombs. Then I set out 40 little roach traps along the walls. They expect people to live in that kind of filth? It was a disgrace."

GROOMS

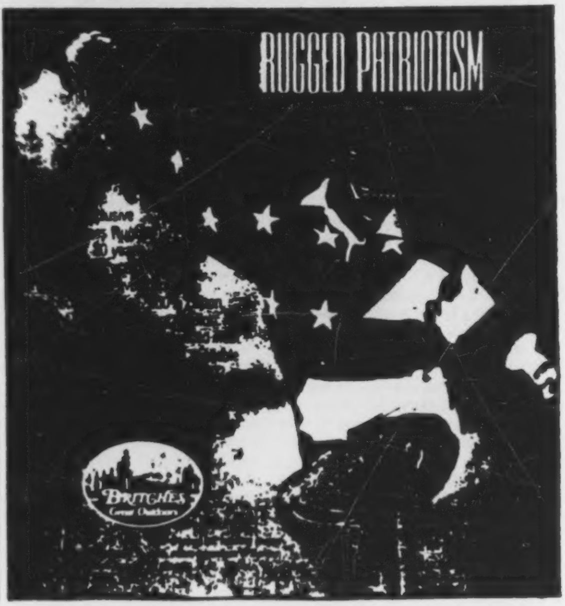
Not far from the hole-in-the-wall where Clay lived for three weeks is a single-story stone building containing room C-61, which is shared by five Mexican nationals. One of the cots in C-61 is rolled up each morning so that the men have room to move around. Like most Mexicans who work backstretches in America, they are willing to endure the cramped quarters because racetrack housing is free, enabling them to send the bulk of their earnings home to their families. Room C-61, entered through a knobless door with one lock, is spare. In it are a 13-inch TV atop a small refrigerator, a hot plate and stove for cooking frijoles and tortillas, and a four-door wooden closet. A tattered maroon blanket hangs across the window. Groom Antonio Amezcua, 30, sends $800 of the $1,000 he makes a month to his wife and son in the state of Michoacán, west of Mexico City. Amezcua has not been home since last spring. His is a lonely life, a routine bracketed by sleep and hours of tedium.

"We don't go out much," says Amezcua. "We amuse ourselves here in the room, talking and looking at television. Sometimes, when it gets warm, we find an open space and play soccer, kick the ball around. We miss our families. We write a lot. Once a month we may make a call, but mostly we write. My life in Mexico has changed much since I started working here. I live a little bit better than before. I think my life will get even better if I continue to work hard."

There is no running water in the room, no bathroom, no private shower. In the winter the men dress against the cold before heading out to the washroom, 25 feet away. If there is a saving grace for the five amigos living cheek by jowl in C-61—"like cigarettes in a package," one of them says—it is that they do not have to endure the eye-watering odors and discharges that befoul life in C-40W, a two-story redbrick dormitory for grooms and other track employees across from the Frenchman's Kitchen, the cafeteria in the stable area.

One day in February, the dorm's first-floor bathroom was awash in the rank overflow from stopped-up toilets. An aging lump of human excrement lay in a back corner of the shower. The mirrors above the sinks had been shattered, and the room was littered with used bathroom tissues. In the hall outside, sand and mud caked the wet wooden floor. Upstairs and

Stetson
Easy to
Hard to resist.
STETSON FITS



down, throughout the corridors and the stairwell, a monkey-house reek pervaded the air. Down the first-floor hall, in one of the 11- by 14-foot rooms, groom Gary Pratt, who rubbed New York stakes star Champagneforashley last year, before being disabled by a hernia, was lying in his bed, watching television and listening to the hum of the fan blowing out the window. His roommate was out.

Pratt has loved his life on the racetrack, working with the horses. "I've made good money, and I get along with horses," he said. "I like to spend time with mine. Hey, they're in their stalls 22 hours a day, and that's rough, boring duty. But it's worth the extra work. I just like the way they run, the way a good thoroughbred moves, like Champagneforashley. Boy, it's exciting when you have a good one."

For Pratt, 35, one of the prices he has been willing to pay is living in C-40W. "It's embarrassing to live here," he said. "You can't bring anybody here because of the fumes. I use the upstairs bathroom—I have a key to it—because there is no way I'd ever take a shower on this first floor. You'd shower in there and come out stinking worse than when you went in. You get people who don't live here wandering in all the time, and they don't care what they leave behind."

Pratt glanced around the room. "I did all this decorating," he said. "Put up shelves for clothes. Put in the ceiling fan. I painted it all. It was really dirty when I moved in. Dirt on the walls. It took me about 2½ weeks, little by little, to make it livable. I don't much like living in this building. It's not only the fumes. You don't have any privacy. The rooms are noisy. No air-conditioning. The whole building is boiling in the summer. But it's been my home here."

Set against the grandeur of Belmont's clubhouse and grandstand, these backstretch rooms provide the most vivid example of substandard living conditions at American racetracks, but they are not alone. Hollywood Park in California has been promising for years to tear down its leaky wooden tack rooms (this is the year, the track says), and last summer at Del Mar, just north of San Diego, some grooms were still living in detached cubicles so small that they looked like privies—wooden boxes so confining that one Mexican joked that he had to step outside his room to change his mind. At Gulfstream, meanwhile, some of the backstretch living quarters are "a disaster," says trainer P.G. Johnson. "In some rooms you have to run an extension cord in from the tack room to light the place. No outlets. Cement floors." And in Maryland, living quarters at Laurel and Pimlico are from another age.

"It's very primitive living," says James Rouse, the developer of Columbia, Md., and Baltimore's Inner Harbor, whose Enterprise Foundation raises funds to build low-income housing and is helping to develop plans for three new dormitories at Laurel. "It's surprising, with so much wealth involved in the sport. People in black Cadillacs come to see their horses run, and they don't see how the people live."

For decades the workers in shedrow—except for the rare celebrity, such as Harbut or Sweat—have labored in anonymity, isolated from and largely unseen by the public. At even the highest levels, no one knows the grooms' names. "They are the unsung heroes of the sport," says East Coast trainer Sonny Hine. Four years ago, when Chrysler Corporation began sponsoring the Triple Crown Challenge, company executives decided to give away a new car to the winning jockey of each event. To give a new Lebaron to a rider with a seven-figure income is to throw gold dust at Solomon. After the jockey, trainer, owner and breeder take their bows for the cameras, the one who truly knows the horse best—the one who has put in all the hours on his knees, applying ointment to the animal's legs and wrapping and pinning the bandages, holding the open safety pins between his teeth—drives to a diner in a battered Chevy with expired plates.

"Grooms spend more time with the horses than the trainers do, but what do they have to look forward to?" asks Hine. "Another racetrack, another job. They are like nomads, going from track to track. Inadequate medical programs. No retirement."

Walter Love, one of trainer Woody Stephens's grooms, has just finished digging up the hard dirt floor in front of his three horses' stalls at Gulfstream and is carefully leveling it with a wooden rake. "I love horses, and I like my job," says Love, the 53-year-old son of Arkansas sharecroppers. "Nobody messes with you. But this is no kind of life. When you get sick on some of these tracks, you just die. There's no protection, no security. I've known grooms who worked on the racetrack 50 years and they retired with no place to stay. No home. No family. No place to go."

Love shakes his head, stays low and keeps on raking. "I was makin' $70 a week grooming in 1961," he says. "Clear. No taxes. The man I was workin' for gave us a $50 bill and a $20 bill. Every Saturday. Thirty years later I bring home $170 a week after taxes. You can't live outside the track for that kind of money—and eat, too. And you better not have any bad habits. You barely make it from paycheck to paycheck. The only ones to make money back here are the trainers and jockeys. Owners already are rich. No one back here gives anything away."

For Lichtenberg, the laying on of hands includes layering on ointment to help reduce swelling.

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In caring for Chas after his big victory, Stubbs moved about with workerant efficiency, first wielding a pitchfork, then the brushes and rags, then moving to the feed bin and back. He forked the wet bedding and droppings from the stall, spread out fresh flakes of straw, then grabbed a handful of straw and wiped it briskly across Chas's back and shoulders. Now on his knees, Stubbs toweled off the horse's legs. Moments later he was back on his feet with [illegible] the bristles down the chestnut's neck, shoulders and back, moving the hands in quick figure eights, one brush [illegible]wing the other along the coat. The h[illegible] danced sideways into him, then came to attention when Stubbs scolded: "Come on over here! Don't step on me."

Stubbs tossed the brushes to the side, picked up a can of mud caulk and packed a scoop of it on the bottom of each of the gelding's feet. "This dr[illegible] out any heat caused by the pound[illegible]," he said. He fetched a bottle of ru[illegible] alcohol and, dropping again to his [illegible], splashed it on the chestnut's front legs. Stubbs massaged the alcohol in, his hands kneading the cannon bones. The legs were now ready for the artwork. From Chas's ankles to his knees, the groom slowly, meticulously applied a gray medicated poultice. He looked like a sculptor at work.

"This drains the soreness out of his leg, if there is any," said Stubbs. "Just a precaution. He was just a tick off the track record today. Must be workin'."

That done, Stubbs wrapped each front leg with sheets of cotton, again with tedious care, and then he rolled cotton bandage over the sheets, fastening it with safety pins. "Racehorses been good to me," he said. "I've had a lot of luck in my life grooming horses. I don't mind putting in the time. Put in the time and you always get something out of it. Hey, don't bite me!"

It was just past 6 p.m., 12 hours after the groom's day had begun. Outside, it grew cold and dark as Stubbs kept on working. Now he pulled the horse's head down, forced open a flickering eyelid and blew a quick jet of air into the eye. "That gets the dirt out," he said. Five minutes later, he filled a rope hayrack in the feed bin, slung it over his shoulder and lugged it to the horse's stall. The groom tied it to the outer door. Chas attacked the hay, swallowing it in gulps. "They need someone to take care of 'em," said Stubbs. "That's what I do. It's a responsibility. I have no regrets. I put my son through three years of college. The horses paid for the oxygen for my mother-in-law before she passed. They have kept me and my wife all these years."

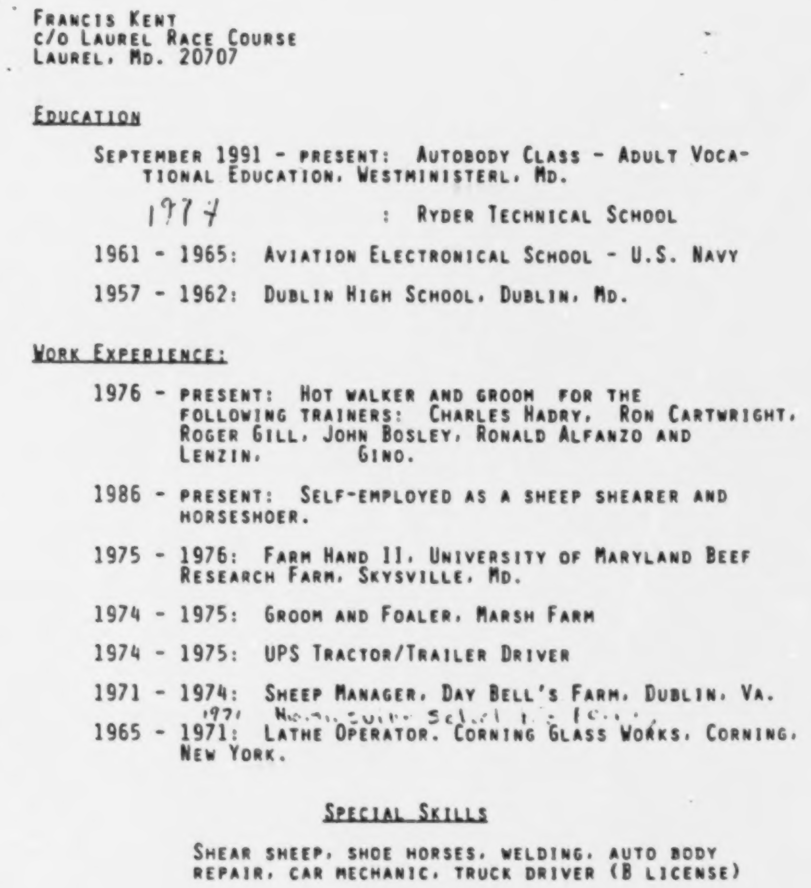
Stubbs was nearly finished now. He began preparing the gourmet meal. Into a large tub he poured six quarts of oats, a quart of sweet feed, a half cup of bran, two ounces of salt and 1½ ounces of flax seed. "The flax makes their coats shiny," he said. To that concoction he added three squirts of Redgle, a liquid vitamin supplement, three gurgles of molasses and three quarts of hot water. Stubbs stirred the mixture with a hand. The young horse raised his head as the groom carried the meal to the stall.

"My son asked me if he could work on the racetrack, and I said 'No way!'" Stubbs said. "I wouldn't recommend it. But if I had it to do over again, I'd be right with the horses. There was always something about them that I loved. I love what I do. I'm still lookin' for the big horse, the Derby horse. Maybe someday. Be a bricklayer? A carpenter? They can have that. Gimme my brushes, my towels, my horses. And here I am." ■

At the DeStasio barn at Belmont, first light finds grooms and horses already stirring about the stalls.

CASAS Objective 4.1.2 - Interpret job applications, resumes, and letters of application

RESUMES



FRANCIS KENT
C/O LAUREL RACE COURSE
LAUREL, MD. 20707

EDUCATION

SEPTEMBER 1991 - PRESENT: AUTOBODY CLASS - ADULT VOCATIONAL EDUCATION, WESTMINISTERL, MD.

1977 : RYDER TECHNICAL SCHOOL

1961 - 1965: AVIATION ELECTRONICAL SCHOOL - U.S. NAVY

1957 - 1962: DUBLIN HIGH SCHOOL, DUBLIN, MD.

WORK EXPERIENCE:

1976 - PRESENT: HOT WALKER AND GROOM FOR THE FOLLOWING TRAINERS: CHARLES HADRY, RON CARTWRIGHT, ROGER GILL, JOHN BOSLEY, RONALD ALFANZO AND LENZIN, GINO.

1986 - PRESENT: SELF-EMPLOYED AS A SHEEP SHEARER AND HORSESHOER.

1975 - 1976: FARM HAND II, UNIVERSITY OF MARYLAND BEEF RESEARCH FARM, SKYSVILLE, MD.

1974 - 1975: GROOM AND FOALER, MARSH FARM

1974 - 1975: UPS TRACTOR/TRAILER DRIVER

1971 - 1974: SHEEP MANAGER, DAY BELL'S FARM, DUBLIN, VA.

1971 Horseshoeing School [illegible]

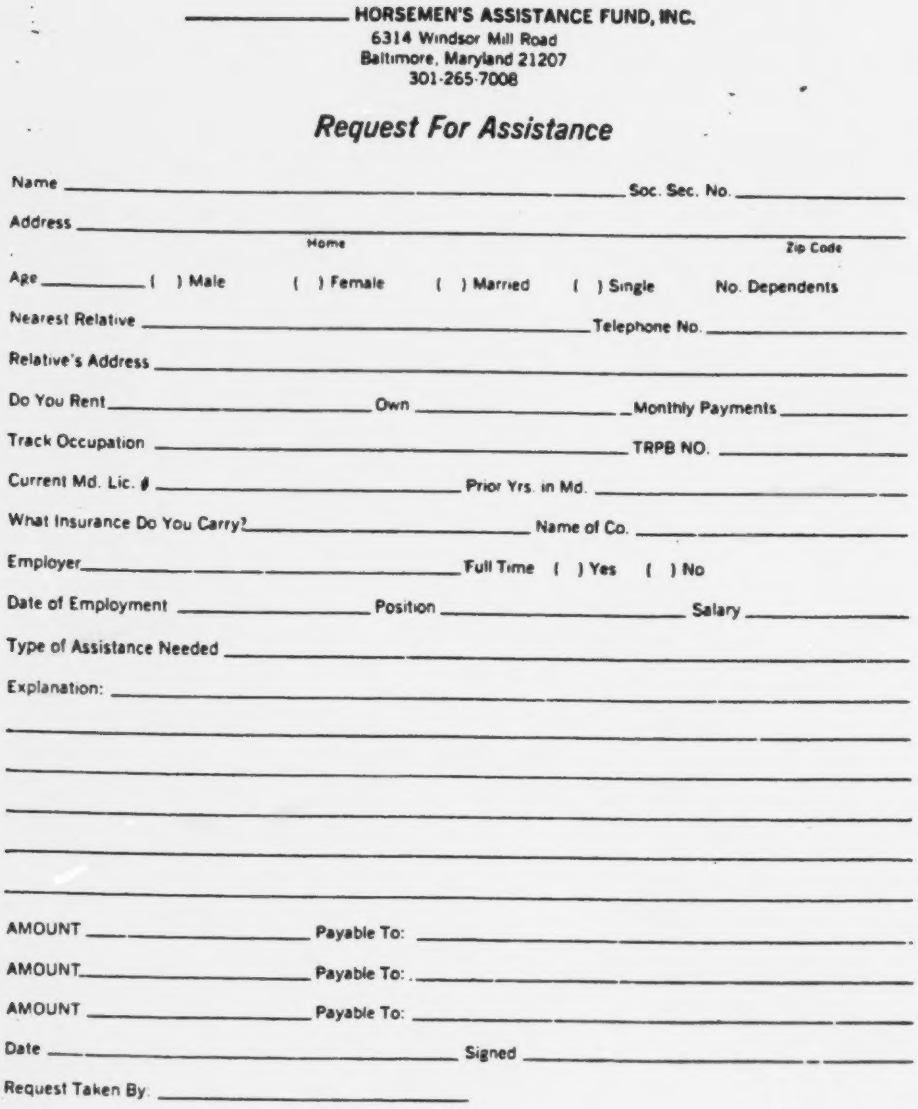
1965 - 1971: LATHE OPERATOR, CORNING GLASS WORKS, CORNING, NEW YORK.

SPECIAL SKILLS

SHEAR SHEEP, SHOE HORSES, WELDING, AUTO BODY REPAIR, CAR MECHANIC, TRUCK DRIVER (B LICENSE)

CASAS Objective - **Recognize and use occupational signs, charts, forms, and written directions.**

REQUEST FOR ASSISTANCE



____ **HORSEMEN'S ASSISTANCE FUND, INC.**
6314 Windsor Mill Road
Baltimore, Maryland 21207
301-265-7008

Request For Assistance

Name ____ Soc. Sec. No. ____

Address ____ Home ____ Zip Code

Age ____ ( ) Male ( ) Female ( ) Married ( ) Single No. Dependents

Nearest Relative ____ Telephone No. ____

Relative's Address ____

Do You Rent ____ Own ____ Monthly Payments ____

Track Occupation ____ TRPB NO. ____

Current Md. Lic. # ____ Prior Yrs. in Md. ____

What Insurance Do You Carry? ____ Name of Co. ____

Employer ____ Full Time ( ) Yes ( ) No

Date of Employment ____ Position ____ Salary ____

Type of Assistance Needed ____

Explanation: ____

AMOUNT ____ Payable To: ____

AMOUNT ____ Payable To: ____

AMOUNT ____ Payable To: ____

Date ____ Signed ____

Request Taken By: ____

LITTON - AMECON

Site: Conference room at Litton-Amecon

Instructor: Audrey Parsons

Time: Work Release
May 29, 1991 - August 26, 1991
Monday and Wednesday
11:30 AM - 1:00 PM

Student: Non-English speakers who needed to take the MIL standard 2000 test to be certified in their jobs.

Instructor Summary:

The Litton Workplace class was comprised of 8 employees (3 women and 5 men). They were all non-native English speakers. (1 Indian male, 1 Asian male, 1 Vietnamese female, 3 Hispanic males and 2 Hispanic females.)

The educational levels of the participants varied from completion of high school with some technical training beyond, to one Hispanic female who could barely read and write English. She admitted that she copied others' answers on previous tests because she didn't understand English.

The class was conducted during their lunch hour with Litton providing work release time to make the class one and a half hours twice a week. The 40 hour course ran from May 29th through August 28th, 1991.

Management was very cooperative in arranging work release time and in providing feedback on the employees' progress and problems. Management also was very specific in setting goals/needs of the employees. They felt these employees needed extra help in reading and writing English. They especially wanted these employees to be able to understand and take standardized tests required for certification in their jobs. The specific test of concern was the MIL Standard 2000.

The motivation of all the participants was very high. All wanted to pass the upcoming standardized test and were afraid they might lose their jobs if they didn't. The company was downsizing from approximately 2,000 employees to 600 employees. The fear of being RIFed was very motivating. The participants were hopeful that improving their English skills would help them maintain their jobs. The class provided a support system during this time and most of the participants shared their fears of being RIFed with each other and the instructor.

Time and location were convenient. Litton is housed in several buildings with entrances and exits via security badges. Therefore, the employees seldom left the campus for lunch and were happy to bring their lunches to class.

As the course progressed, some of the participants expressed that they were receiving negative comments from co-workers. Their co-workers felt they were receiving favoritism because they were studying for the MIL Standard 2000. Other co-workers stated if the participants had to take a class called Workplace Literacy that they must be unable to read and write and should possibly be RIFed. The ability to discuss these feelings with each other and the instructor helped alleviate their anxieties. Tim Edwards, the Division Director of Employee Relations, discussed these problems with the teacher and was very supportive.

By course completion, all students had studied the material covered by the MIL Standard 2000; used contextual clues and an index to find specific workplace information; summarized government issued text materials; read and discussed unfamiliar parts of the employee handbook; written a job application letter; read want ads; filled out sample job applications; written a simple resume; written a letter of complaint; and written a request - for - information letter. Each employee also participated in brainstorming the topics "What I'd do if I lost my job" and "What job would I want if I lost my job." This exercise allowed us to talk about future education goals and life-long learning. All participants showed an improved and positive attitude at the end of the class. All stated they felt they were better prepared to get another job if the need arose.

This was a very successful and rewarding class because:

1. The students were highly motivated.
2. The management was supportive with release time, and they provided easy teacher access into the secured building.
3. Tim Edwards, the company contact, was exceptionally supportive of the students and teacher. He always returned phone calls or memos promptly, and he provided guidance when any concerns arose from the students.
4. Litton readily provided copies of materials like Employee Handbooks, memos, and standardized tests for all students.
5. The students truly had needs that could be met by this Workplace Literacy class.
6. The students gained knowledge, but more importantly, gained self-esteem.

MIL-STD-2000 THEORY

e. Solder joint formation theory

(1) Set-up

(a) Materials to be joined must be cleaned of all contaminants otherwise weak spots will be formed in the connection

(b) Work station arrangement

1) Solder, tools, irons, and any other equipment should be arranged for maximum ease and comfort during the actual operation

2) Any materials which do not conform to MIL-STD-2000 should not be at the work station

(c) An important part of the soldering operation is the comfort of the operator. Hand rests, as well as the paths used to apply tools and materials during the operation should be tested in advance

(2) Flux

(a) As already discussed, flux is used to remove light oxidation from a connection prior to soldering

1) Internal flux is that which is applied by flowing out of flux cored solder

2) Fluxed cored solder should be placed in such a position as will allow the flux to flow out over the connection

3) External flux is applied separately

4) When using external flux, the amount should be limited, and should be restricted to the area being soldered

5) As stated previously, whenever both fluxes are used together, they must be compatible

REFERENCE 2000: Para. 5.5.6 (pg.136)

(3) Solder

(a) One of the keys to successful soldering is the proper use of the heat bridge

1) The purpose of the heat bridge is to transfer heat rapidly to all parts of the connection

a) Solder flows over metal only if the temperature of the metal is greater than the melting point of solder. If the metal is not hot enough, the heat will be drawn out of the solder, cooling the solder to the point where it will stop flowing

b) The area of contact between the iron and the connection is critical to the amount of heat transferred to the connection. A heat bridge expands the amount of contact by providing a layer of liquid solder

g. 114 (pg.137)

2) The procedure for establishing a heat bridge is simple. In general:

a) Lay the solder on the connection so that it contacts all elements of the connection

b) Bring the iron in on top of the solder, so that as it melts through, the iron tip rests against all elements of the connection

(b) Application points

1) The placement of the iron is critical to the soldering process. Since solder flows along properly heated material only, the iron must be placed so as to heat the whole connection. In general the following guidelines apply:

a) The tip should be placed at a point common to the surfaces being joined

b) If the tip is chiseled, the chisel should always have full contact with the surfaces

c) A good angle for bringing the iron on or off is 45 degrees

d) The tip should be away from the solder feed point

e) The tip should generally be towards the center of any connection, near the hole on a plated-through hole, so that heat will flow to all parts of the connection

(2) After the heat bridge has been made, the solder should be fed at a point away from the iron tip, though always on the same side of the printed wiring board

(c) Feed parameters

(1) Solder feed rate is affected several ways

a) As the solder melts, the heat is taken out of the connection. The solder will flow more slowly and unevenly. Poor wetting and cold solder could result

b) Excess feed rate could also result in too much solder accumulating on the connection

c) A very slow feed rate causes the whole connection to be completed with more heat

d) An excess dwell time could be required before an acceptable amount of solder is flowed over the connection

(2) The other parameter which works in conjunction with feed rate, is dwell time. Some important points to remember about dwell time are

- a) A short dwell could result in cold solder, poor wetting, or insufficient solder, as the iron does not have time to heat the whole connection
- b) An excess dwell time can result in pad lifting, measling, or overheated solder

(3) Both of these parameters have to be adjusted with respect to each other, and with respect to

- a) Solderability of the surfaces
- b) Flux utilized
- c) Temperature being utilized
- d) Heat transference to connection elements
- e) Amount of solder required on the connection
- f) Lead to hole ratio
- g) Size and dispersion of connection elements

(d) Flow characteristics of the solder

(1) Solder will flow across a solderable surface until it encounters a less solderable surface, or until the temperature of the surface drops below a certain point

(2) The important factors to consider are

a) Cleanliness/solderability of the surface, including

1) Contamination

2) Oxidation

3) Porous surfaces

4) Unsolderable alloys in the surface

b) Heat conduction

1) Radiation of the heat from the source

2) Cooling of the surface from the melting action of the solder

(3) The adhesion of the solder is important to the reliability of the connection. Outward indications are used to determine if the solder did not adhere to one or both surfaces. Some indications are

a) Poor wetting

b) Disturbed connection (feather lines running in a pattern up a connection)

c) Solder not smooth and shiny. Some connections will naturally have a dull or grainy appearance such as

1) High temperature solder

2) Solder connections made on gold plated surfaces

(4) Wetting is one of the most important characteristics of a solder connection

a) Good wetting is when the solder smoothly merges into the surfaces being joined with a small positive contact angle

b) Poor wetting is when the solder stopped flowing at some point, indicating a heat problem or solderability problem

c) Dewetting is a condition seen primarily on printed wiring boards, where the solder flows onto an area, then recedes leaving a thin coating with several mounds of solder

(e) The removal of the soldering iron is also critical to the process. Points to remember are

(1) The iron should be removed at approximately the same angle used in its application, about 45 degrees

(2) The iron should be removed at the same time that the solder is withdrawn

a) If the solder is withdrawn first, the solder on the connection will tend to overheat, and could follow the iron as it is withdrawn, leaving a spike

b) If the iron is withdrawn first, the remaining solder will cool quickly, and not flow out properly. It is also possible for the solder to stick in the connection, requiring a reheat (which would require inspection and approval to remove)

(3) During the removal of the iron and solder, the connection will pass through the critical plastic phase. Any motion during this phase could result in a disturbed connection

a) Using eutectic solder limits the plastic phase. However, due to changes occurring to the alloy during the process, a small plastic range may still exist

(f) Step soldering is a process used for interfacial connections on non-plated-through holes. This is the only time a solder connection would be soldered from both sides of the board. Each side of the board is soldered independently

(1) When installing clinched wires in plated-through holes, step soldering should not be used

REFERENCE 2000: Para. 5.4.19 (pg. 116)

(g) Post solder cleaning

(1) When hand soldering, the time from the completion of the connection until the final cleaning is performed may be extended by the use of interim cleaning methods

a) Explain the interim cleaning methods in use at the facility

(2) The final cleaning must be performed within one half hour of the soldering operation, unless interim methods are used. In the latter case, final cleaning must be performed by the end of the shift

a) Explain the cleaning process in use at the facility

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(h) The final inspection will be performed by Category D personnel on the floor, but in the classroom an inspection should be performed with the following characteristics in mind. An awareness of these defects on the line will also allow the operator to correct any bad habits as they develop

(1) Solder quantity

a) Too much solder occurs when the solder obscures the outlines of the wire or lead, when it exceeds the boundaries of the connection, or when it has a convex appearance

b) Not enough solder occurs when the wetting does not extend to the periphery of the pad, when the fillet undercuts the lead or wire, or when the solder depresses into the plated-through hole more than allowed

(2) Fillets

a) Solder fillets should extend out over the entire connection, and should not undercut the lead or wire. The fillets should have a concave appearance

(3) Wetting, as has already been discussed, is a prime indication of the quality of the connection

a) Good wetting is indicated by the solder flowing over the entire connection, with a small positive contact angle between the solder and the surface to be joined

b) Poor wetting appears as an irregular solder flow, or a high contact angle between the solder and the surface being joined

(4) Other defects which should be checked for such as

- a) Points, peaks, or icicles
- b) Pits, holes, or voids
- c) Rosin connection
- d) Contaminated connection
- e) Dirty connection

(4) Solderability

REFERENCE 2000: Para. 5.4.4 (pg.107)

(a) Definition - the ability of a clean metal surface to readily accept solder

(b) Acceptance criteria - 95% tinning coverage after testing

1) MIL-STD-202, Method 208

2) MIL-STD-105, Inspection Level S-2, AQL 1.0% defective

(c) MIL-STD-2000 requirements

1) Component leads, terminations and end caps must be solderability tested within 30 days of receipt

2) If more than 120 days elapse before use, the items shall be retested or shall be hot solder dipped to provide a fused coating with a minimum thickness of 0.0001 inch (0.0025 mm)

3) Solderability shall be tested after tinning using MIL-STD-202, Method 208 (including steam aging) and the same sampling plan

MIL-STD-2000
THEORY

3. Certification 5.2.1 (pg. 48)

   a. Eligibility

      (1) Must be certified prior to soldering or inspection according to the requirements listed in MIL-STD-2000 para. 5.2.1 pg. 48

      (2) Each individual must have a certification visibly displayed at the work station or on his/her person

CASAS Objective 4.4 - Understand materials and concepts related to job training, employment, keeping a job and getting a promotion.

MIL-STD-2000 MATERIALS

OPERATOR CERTIFICATION COURSE
MATERIALS

REFERENCE 2000: Para. 4.10.1 (pg.9)

(1) Solder

(a) Background/theory

1) Soldering is a process which bonds two metals together with an alloy which conducts electrically

2) Soldering is a chemical reaction between the metals and the solder

3) Soldering is an ideal process for standard electrical connections because

a) The process is nondestructive of the elements of the connection

b) The process temperatures can be controlled to prevent damage to components

c) A well-made connection is reliable over an extended period of time

(b) Eutectic solders

1) A particular alloy is eutectic if it melts and solidifies at the same temperature

2) Most solders pass through plastic, intermediate range between solid and liquid

3) It is in this region that movement causes disturbed connections

4) Eutectic alloys limit disturbed connections

(c) MIL-STD-2000 requirements

1) The MIL-STD-2000 references another document, QQ-S-571, for the requirements on solder

(c) Applications

1) Soldered surfaces must be cleaned within 30 minutes of solder solidification

5.4.19.1 (pg.116)

2) If interim cleaning methods are utilized, then cleaning may be delayed after soldering operations are completed, provided that the final cleaning process removes all contaminants

(d) MIL-STD-2000 requirements

1) Solvents or aqueous cleaners shall be selected for their ability to remove both ionic and nonionic contamination

2) Solvents or cleaners shall not degrade the materials or parts being cleaned

3) Lists of approved solvents and cleaners are shown in Tables I and II

4) Other solvents and cleaners shall be approved by the Government Contracting Officer

NOTE: DIRECT STUDENTS TO TABLES I AND II OF MIL-STD-2000-1 AND COVER NOTES

(e) Precautions - review safety and handling precaution particular to the company's installation and cleaning methods utilized

REFERENCE 2000: Para. 5.3.4.,5.3.5, and 5.3.6 (pg.56)

(b) MIL-STD-2000 requirements

1) The specification referenced for flux requirements is MIL-F-14256

2) The only fluxes allowed for general soldering are type R and RMA

3) Other types may be used for tinning with approval

(c) If an external flux is used with a flux cored solder, it should be of the same type

REFERENCE 2000: Para. 4.10.4 (pg.10)

(3) Solvents and cleaners

(a) Purpose

1) To remove ionic and nonionic contaminants from soldered surfaces and to prevent corrosion

(b) Types

1) Polar

a) Removes ionic contaminants from soldered surfaces

2) Nonpolar

a) Removes nonionic contaminants

3) Bipolar

a) Removes both ionic and nonionic contaminants

b) Types

1) Blends

2) Azeotropes

c) The best cleaning process utilizes a Bipolar vapor degreaser with a deionized water rinse

2) Normal temperature solders are Sn60, 62, and 63 for normal temperatures. High temperature solders Sn5, 10, and 96 may be used if the drawing specifies them

3) The form of the solder is optional i.e., wire, paste, preform, etc.

4) The core of flux cored solder must be type R or RMA

(d) Precautions

1) Contamination

2) Personnel safety

a) Avoid inhalation of vapors from the solder process

b) Avoid contact with hot solder, or solder splatter

REFERENCE 2000: Para. 4.10.2 (pg.9)

(2) Flux

(a) Background/theory

1) The primary purpose for using flux is to remove light oxidation
2) Flux also prevents re-oxidation and aids the wetting action of the solder

3) Oxidation is a normal process which occurs in metals exposed to the atmosphere

4) The layer of oxidation does not bond readily with the solder, and results in poor solder connections

5) The heat from the iron activates the flux, causing it to remove the oxidation layer

6) Flux is not a general cleaner, and should not be used in lieu of pre-cleaning

CASAS Objective 4.4 - Understand materials and concepts related to job training, employment, keeping a job and getting a promotion.

HI-REL TEST

HI-REL TEST 5 NAME:
NOVEMBER 9,1989 DATE:

1. Rework of unsatisfactory connections shall:

_____ a. Be performed only by inspection personnel.

_____ b. Not be performed until inspection personnel have documented the discrepancy.

_____ c. Not be performed until MRB has determined the proper mehtod of rework.

_____ d. Be performed prior to inspection.

2. The reason you are required to wear finger cots or cotton gloves is to:

_____ a. Protect the fingers of the operator.

_____ b. Prevent damage to the assembly

_____ c. Prevent physical contact between the surfaces to be soldered or coated, and the bare hands.

_____ d. Assure electrical insulation.

3. Magnification aids for other than soldered connections shall be:

_____ a. 5X or greater

_____ b. 4X to 10X magnification power.

_____ c. 2X to 4X magnification power.

_____ d. At least 30X.

4. The magnification power used to inspect soldered connections must be:

_____ a. 2X to 4X magnification power.

_____ b. 4X to 10X magnification power.

_____ c. 4X for inspectors and 10X for referee purposes.

_____ d. Of a focal length at least 2X the eye to lense working distance.

5. Training and certification of categories D, E, and R is primarily the concern of the:

_____ a. Category A (contractor).

_____ b. Designated category B.

_____ c. Category C

_____ d. Category H.

6. The inspection after soldering is performed by:

_____ a. The operator who performed the operation.

_____ b. Any operator who was not involved in the initial soldering.

_____ c. An inspector certified as category D.

_____ d. An inspector who is authorized by the category D.

7. Which of the following situation(s) require recertification of the operator?

_____ a. Decline in proficiency.

_____ b. Implementation of new techniques.

_____ c. 12 months have passed since last certification.

_____ d. Any of the above.

8. If you have already recieved your certificate, and you fail to meet the vision requirements, the following will occur:

_____ a. Recertification with less visually oriented techniques.

_____ b. Addition of Category R (restricted) designation to certificate.

_____ c. Revocation of certified status.

_____ d. Review of performance and proficiency.

9. Rework can be performed:

_____ a. When the operator recognizes a defect which will lower reliability.

_____ b. By inspection personnel only.

_____ c. After inspection personnel have documented all defects.

_____ d. When the defect has been documented by either the operator or the inspector.

10. The proficiency of each operator is reviewed:

_____ a. Periodically.

_____ b. Continuously.

_____ c. Quarterly.

_____ d. Monthly.

11. As an operator, you will check your iron for the following problems: Oxidation of the tip, corrosion, wrong type of iron or tip, and poor performance. These checks must be made every:

_____ a. Hour.

_____ b. Day.

_____ c. Week.

_____ d. Month.

12. Solvents and cleaners should be selected for the ability to remove:

_____ a. Light oxidation.

_____ b. Ionic contamination.

_____ c. Non-ionic contamination.

_____ d. Both ionic and non-ionic contamination.

13. On flatpacks the lead terminations shall:

______ a. Not have a fillet which extends up the lead beyond the heel.

______ b. Be positioned so the lead does not overhang the side of the pad.

______ c. Always be seated on the terminal area for the full length of the pad.

______ d. Be positioned so that the lead does not overhang the toe of the pad.

14. When wrapping a wire to a turret terminal, the minimum amount of wrap required is:

______ a. 3/4 turn.

______ b. 1/2 turn.

______ c. 1/4 turn.

______ d. 1/8 turn.

15. The minimum inside bend radius on any formed lead shall be:

______ a. 1 1/2 times the lead diameter.

______ b. One lead diameter.

______ c. 1/8 inch.

______ d. 1/16 inch.

16. Tools permitted for the removal of insulation from stranded wire are:

______ a. Thermal or precision mechanical strippers.

______ b. Round nose pliers.

______ c. Wicking tweezers.

______ d. Shear type cutters.

17. Birdcaging of wire strands is:

_____ a. Acceptable if there are no broken strands.

_____ b. Never acceptable.

_____ c. Acceptable only if the wire is teflon coated.

_____ d. Acceptable if the inspector clears it.

18. Wires or strands shall not exhibit nicks, cuts, scrapes, stretching, or other observable damage in excess of:

_____ a. 10% of the original diameter of any strand.

_____ b. 15% of the original diameter of any strand.

_____ c. 5% of the original wire diameter.

_____ d. 0% (No damage is acceptable).

19. When you are forming component leads, you should not damage the lead more than:

_____ a. 5% of the lead diameter.

_____ b. .060 inch of the lead diameter.

_____ c. 10% of the lead diameter.

_____ d. .001 inch of the lead diameter.

20. When inspecting a prepared wire for damage to the insulation, which of the following is not a cause for rejection?:

_____ a. Gouges.

_____ b. Ragged edges.

_____ c. Charred insulation.

_____ d. Slight discoloration.

21. The minimum lead bend radius of manually formed component leads shall be:

______ a. 90 degree bend.

______ b. 3 lead diameters.

______ c. 1 lead diameter.

______ d. As required by application.

22. The space between the insulation and the solder connection shall be:

______ a. From flush to 3 times the diameter.

______ b. From one (1) wire diameter to 3 wire diameters.

______ c. From visible clearance up to 2 wire diameters (including insulation).

______ d. 1/16 q 1/32 of an inch.

23. The minimum distance from the component end seal to the start of the bend is:

______ a. 2 lead diameters or .030 inch.

______ b. 1/8 inch.

______ c. 1 lead diameter or .030 inch.

______ d. 1/16 inch.

24. What is the allowed toe overhang when soldering a flatpack lead?

______ a. Flush to toe-end only.

______ b. 25% of the lead width.

______ c. One lead width.

______ d. .030 inch maximum.

25. The maximum protrusion of a stud termination (type III clinch) is equal t

_____ a. The radius of the pad.

_____ b. .060 inch.

_____ c. 1/16 inch.

_____ d. Twice the lead diameter.

26. Axial leaded components, which are not supported, must be mounted close to the board, within:

_____ a. 0.003 inch.

_____ b. 0.015 inch.

_____ c. 0.001 inch.

_____ d. 0.050 inch.

27. When making a full clinch, the lead is bent over from the upright position a total of:

_____ a. 15 to 45 degrees.

_____ b. 0 to 15 degrees.

_____ c. 75 to 90 degrees.

_____ d. 45 to 90 degrees.

28. The length of a clinched lead must be at least:

_____ a. One pad diameter.

_____ b. 0.060 inch.

_____ c. One-half the pad diameter (the pad radius).

_____ d. 2 lead diameters.

29. Before assembly, a printed wiring board must be:

_____ a. inspected.

_____ b. Pre-cleaned.

_____ c. Oven-dried.

_____ d. All of the above.

30. If a component cannot be positioned such that all the markings are visible, the first priority should be given to markings which indicate:

_____ a. Part value.

_____ b. Part type.

_____ c. Polarity.

_____ d. Traceability code.

31. For solder to wet properly, the area to be soldered must be clean. Foreign materials may be removed by solvent cleaning. Light oxidation on the surface is removed by the fluxing action:

_____ a. TRUE

_____ b. FALSE

32. Each solder connection should be completed in no more than 5 seconds:

_____ a. TRUE

_____ b. FALSE

33. The primary reason for tinning stranded wire is to minimize in-process oxidation, improve solderability, and hold the strands together.

_____ a. TRUE

_____ b. FALSE

j. Wires or strands shall not exhibit nicks, cuts, scrapes, stretching, or other observable damage in excess of 5% of the original diameter of any strand.

_____ True

_____ False

36. The end cap of the chip device shall extend onto the terminal area a minimum of 0.005 inch.

_____ True

_____ False

37. Condensation reflow systems (vapor phase reflow) is a primary way to solder SMT (surface mounted devices).

_____ True

_____ False

38. Birdcaging of wire strands is acceptable only if the wire is teflon coated.

_____ True

_____ False

39. Chip devices mounted on terminal areas with 15 to 20% of their width overhang is acceptable.

_____ True

_____ False

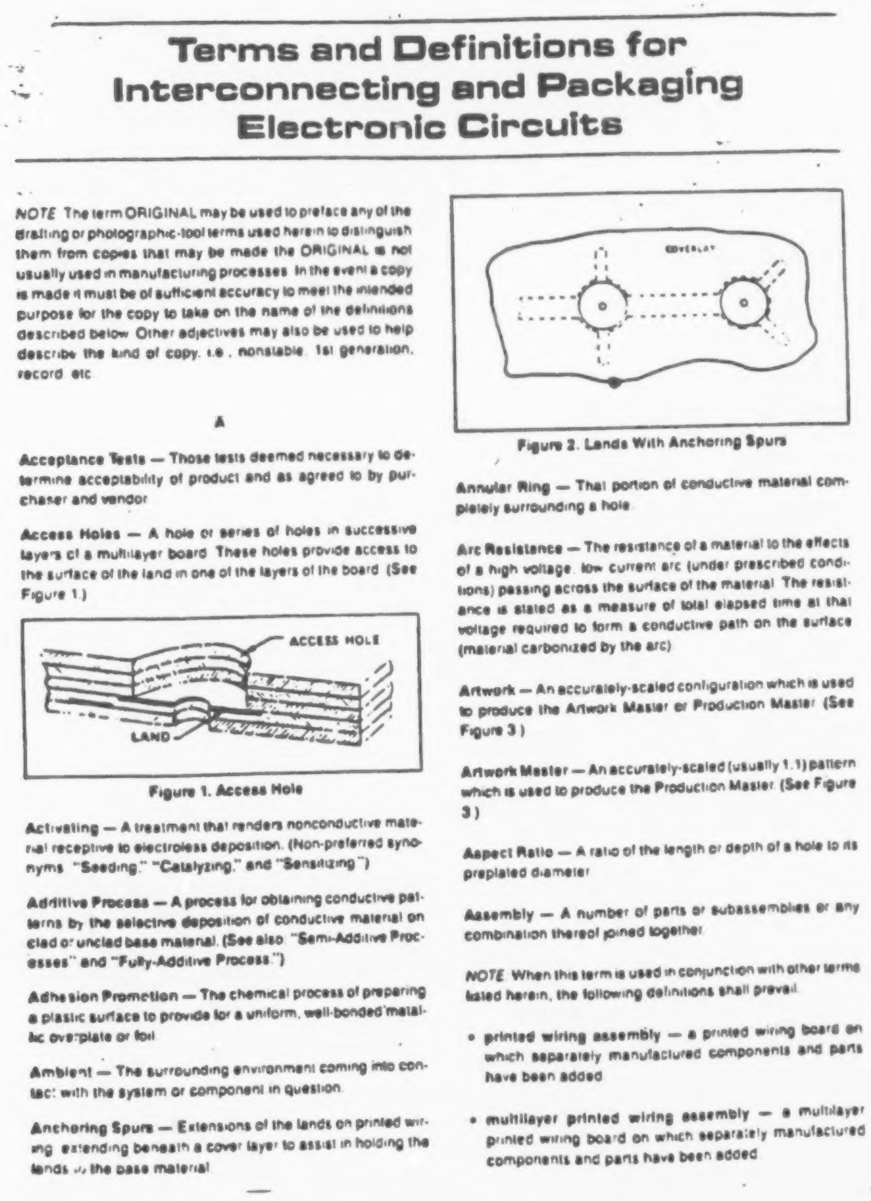
40. When forming component leads, no more than 10% of the lead surface can be damaged:

_____ True

_____ Flase

CASAS Objective 4.1.6 - Interpret general work-related vocabulary (e.g. experience, swing shift)

STANDARDS


ACCESS HOLE
LAND
COVERLAY

Terms and Definitions for Interconnecting and Packaging Electronic Circuits

NOTE The term ORIGINAL may be used to preface any of the drafting or photographic-tool terms used herein to distinguish them from copies that may be made the ORIGINAL is not usually used in manufacturing processes In the event a copy is made it must be of sufficient accuracy to meet the intended purpose for the copy to take on the name of the definitions described below Other adjectives may also be used to help describe the kind of copy, i.e., nonstable, 1st generation, record etc

A

Acceptance Tests — Those tests deemed necessary to determine acceptability of product and as agreed to by purchaser and vendor

Access Holes — A hole or series of holes in successive layers of a multilayer board These holes provide access to the surface of the land in one of the layers of the board (See Figure 1.)

Figure 1. Access Hole

Activating — A treatment that renders nonconductive material receptive to electroless deposition. (Non-preferred synonyms "Seeding," "Catalyzing," and "Sensitizing")

Additive Process — A process for obtaining conductive patterns by the selective deposition of conductive material on clad or unclad base material. (See also "Semi-Additive Processes" and "Fully-Additive Process.")

Adhesion Promotion — The chemical process of preparing a plastic surface to provide for a uniform, well-bonded metallic overplate or foil

Ambient — The surrounding environment coming into contact with the system or component in question.

Anchoring Spurs — Extensions of the lands on printed wiring extending beneath a cover layer to assist in holding the lands to the base material

Figure 2. Lands With Anchoring Spurs

Annular Ring — That portion of conductive material completely surrounding a hole

Arc Resistance — The resistance of a material to the effects of a high voltage, low current arc (under prescribed conditions) passing across the surface of the material The resistance is stated as a measure of total elapsed time at that voltage required to form a conductive path on the surface (material carbonized by the arc)

Artwork — An accurately-scaled configuration which is used to produce the Artwork Master or Production Master (See Figure 3)

Artwork Master — An accurately-scaled (usually 1.1) pattern which is used to produce the Production Master (See Figure 3)

Aspect Ratio — A ratio of the length or depth of a hole to its preplated diameter

Assembly — A number of parts or subassemblies or any combination thereof joined together

NOTE When this term is used in conjunction with other terms listed herein, the following definitions shall prevail

- **printed wiring assembly** — a printed wiring board on which separately manufactured components and parts have been added
- **multilayer printed wiring assembly** — a multilayer printed wiring board on which separately manufactured components and parts have been added

CASAS Objective 4.2.1 - Interpret wages, wage deductions, and benefits, including wage informational charts, pamphlets, and forms

WORK SCHEDULES

2 Work Schedules & Absences

2.1 TIME CARDS
(Ref DV 302)

Amecom's policy is that all employees charge their time to the job on which they work. This is an absolute requirement, without any deviations. Each employee records and charges his or her time to the job or indirect account code on which he or she works and signs the time card to attest to the correctness of the entries. This is done daily as the work progresses, not in advance (except for estimates of Friday hours).*

Inaccurate labor charging is a violation of the law. The U.S. Government often regards the signing of incorrect time cards as a Federal crime constituting a false claim against the government. This can subject the employee and the Company to criminal and/or civil charges.

Violations of this policy will result in disciplinary action in accordance with DV 105 and DV 216.

Details on how to fill out time cards, with samples, are available from your supervisor and in DV 302 which your supervisor will let you read and copy.

*Errors in the estimated charges must be corrected by using a Labor Adjustment Card. See Section 4 of DV 302.

2.2 HOURS OF WORK & PAYDAY
(Ref DV 223)

Hours of work are determined from time to time by the Company. At present, the hours of work are as follows:

Shift 1 — the day shift — is any shift starting between 3:00 AM and 10:59 AM. The standard day shift at Amecom begins at either 7:15 AM or 8:00 AM and ends at either 4:00 PM or 5:00 PM, respectively.

Shift 2 — the swing shift — is any shift starting between 11:00 AM and 6:59 PM. A shift premium of 10% of base hourly rate is paid.

Shift 3 — the graveyard shift — is any shift starting between 7:00 PM and 2:59 AM. A shift premium of 15% of base hourly rate is paid.

All work shifts are eight hours plus mealtime. The 7:15 AM shift has a 45-minute lunch hour, and the 8:00 AM shift a 60-minute lunch hour, about midway through the day, in accordance with schedules established by each department in conjunction with HR. In addition, all shifts are entitled to two rest periods of 10 minutes each, taken midway through each half shift.

Reporting Absences from Work — If your absence was not prearranged with your supervisor, you must notify your supervisor no later than 30 minutes after the beginning of your work shift that you will be absent and the reason for your absence. If you fail to comply with this requirement, there may be a loss in your pay. If it is repeated again, disciplinary action will result. Please refer to DV 216 for additional information.

Payday — Employees are paid each Thursday for work performed the previous week.

2.3 INCLEMENT WEATHER & OTHER EMERGENCIES
(Ref DV 231)

Regular working hours will be observed except in cases of extremely severe weather or other emergency situations. If a decision to close the plant is made before 7:00 AM, the Vice President of Human Resources will arrange to have announcements made by radio stations WMAL-AM (630); WTOP-AM (1500), FM (102.3); WASH-FM (97.1); and WGMS-AM (570), FM (103.5).

2.4 OVERTIME PAY
(Ref DV 209, 210)

Non-Exempt Employees — All non-exempt employees are required by law to receive additional pay for hours worked beyond 40 hours in a work week (Monday through Sunday). For most employees Saturday and Sunday are their normal days off, but some employees have other normal days off from work. In such cases, Sunday refers to the second normal nonworking day.

Time and one-half is paid for hours worked:

- in excess of 40 hours in a standard work week
- on a Company holiday, regardless of total hours worked in the work week (in addition to regular pay received for the holiday). This only applies to full-time active employees.

Double pay is paid for hours worked:

- in excess of 12 consecutive hours (not including meal periods)
- on Sunday, when the following three conditions are met:
  - four or more hours actually worked on the previous day; and
  - thirty-six hours worked during the normal working days of the standard work week; and
  - total hours worked during the standard work week are greater than 44 hours.

CASAS Objective 4.2 - Understand wages, benefits, and concept of employee organizations

PAID LEAVE

For each of your first eight years of continuous service at Amecom, you will be credited with 8 hours per month, or twelve days paid vacation a year (96 hours). From nine years to twenty years continuous service, you will receive ten hours per month, or fifteen days paid vacation a year (120 hours). Each year thereafter, you will receive 13.3 hours per month, or twenty days paid vacation a year (160 hours). The appropriate number of hours is actually credited to your vacation account each week and may be used as soon as earned, if your supervisor agrees.

The amount of vacation leave time you have accumulated will be noted on each of your paychecks. The maximum amount of time you may accumulate is twice your yearly total.

You may arrange to have part of your vacation balance in cash when you take a vacation, in amounts equal to 50% of the vacation time you take. Suppose, for example, that you have 80 hours accumulated vacation leave. If you take a one-week vacation (40 hours), you may request a vacation payoff of 20 hours (50% of 40 hours). This will leave you an accumulated vacation leave balance of 20 hours. All requests for vacation payoffs must cover weekly periods of vacation.

After you have reached your maximum amount of accumulated vacation leave time, you automatically will be paid off for one year's vacation time. If you wish to maintain the maximum amount of vacation hours, you must notify Finance in writing at least two weeks in advance of reaching the maximum amount of leave.

2.8 PAID LEAVE — EXEMPT PERSONNEL
(Ref DV 222)

The salary of a full-time, active exempt employee may be maintained, with the approval of the supervisor, during absences from work resulting from the following: personal illness or injury, personal business, serious illness or injury to a member of the immediate family, or witness duty.

You are credited with 64 hours of paid leave benefits the day you start on the payroll and an additional 64 hours upon each anniversary of your Litton Hire Date. (If the day you start work and your Litton Hire Date are different, a pro-rated portion of the 64 hours will be credited when you start work.) You may use your leave as soon as it is credited.

There is no limit to the amount of leave that you may accumulate. There is no payment made for unused leave.

Exempt employees, under certain conditions, may be granted advance paid leave when they have used up their accrued paid leave, but only when required for personal illness or injury. Requests for advance leave must be handled through your supervisor. Any advanced leave must be repaid from future accumulation or from any vacation balance due you upon termination.

If your absence from work for personal illness or injury is longer than seven consecutive calendar days, you must report to the Occupational Health Nurse for clearance before going back to work. If your absence from work is longer than fourteen calendar days, you must have written clearance to work from your doctor or physician. You must give this to the Occupational Health Nurse when you return.

2.9 SICK LEAVE — NON-EXEMPT PERSONNEL
(Ref DV 222.1)

Sick leave allowance is provided for non-exempt employees who must be absent because of non-occupational illness, accident, or medical or dental treatment. Sick leave accumulates at the rate of one hour per week starting with the first full week of employment and is usable as soon as it is accumulated.

If your absence from work is longer than seven consecutive calendar days, you must report to the Occupational Health Nurse for clearance before going back to work. If your absence from work is longer than fourteen calendar days, you must, on your return, provide the Occupational Health Nurse with a written clearance from your doctor or physician.

If you accumulate more than 104 hours of Sick Leave, you will be paid for the excess hours at the end of each calendar year.

2.10 OTHER PAID LEAVE
(Ref DV 220)

Amecom may grant leave to full-time, active employees for the following reasons, in accordance with the limitations established below.

Cause of Absence	Maximum Time Paid
Bereavement	3 days per occurrence
Jury Duty	30 days every 2 years (less jury duty pay)
Military Training	10 days per year (less military pay)
Voting	2 hours per election

CASAS Objective 4.4.4 - Interpret job responsibilities and performance reviews

PERFORMANCE APPRAISAL

PERFORMANCE REVIEW FORM

Employee Name (Last, First, Middle)	Employee No.	Title
Department	Location	How long has employee worked for you?
Rater's Name (Last, First, Middle)		Title

RATING SCALE

5 = Superior	Outstanding performance that greatly exceeds job requirements.
4 = Good	Performance meets job expectations and generally exceeds them.
3 = Adequate	Basic job requirements are being met.
2 = Poor	Performance is below job requirements.
1 = Unsatisfactory	Performance is unacceptable.
NO = Not observed	Performance not observed.

Circle the rating that most accurately describes the employee's performance for each of the areas listed.

RATING FACTORS	**RATING** (Circle one.)					
TECHNICAL FACTORS—Consider the level of skill or job knowledge demonstrated by employee.	1	2	3	4	5	**NO**
WORK QUALITY—Consider neatness, accuracy, thoroughness, and how well employee grasps and follows instructions.	1	2	3	4	5	**NO**
WORK QUANTITY—Consider whether employee uses time efficiently and effectively.	1	2	3	4	5	**NO**
RELIABILITY—Consider employee's timely completion of tasks and follow-through on all tasks.	1	2	3	4	5	**NO**
ATTENDANCE—Consider punctuality, number of work days missed.	1	2	3	4	5	**NO**
COOPERATION—Consider employee's ability to get along and work well with others.	1	2	3	4	5	**NO**
PARTICIPATION—Consider employee's overall interest, initiative, and enthusiasm shown in work.	1	2	3	4	5	**NO**

COMMENTS

Comment on any rating that is Superior or Unsatisfactory. These comments should give examples of the employee's specific work performance and should illustrate how good or poor the performance is.

Rater's Signature

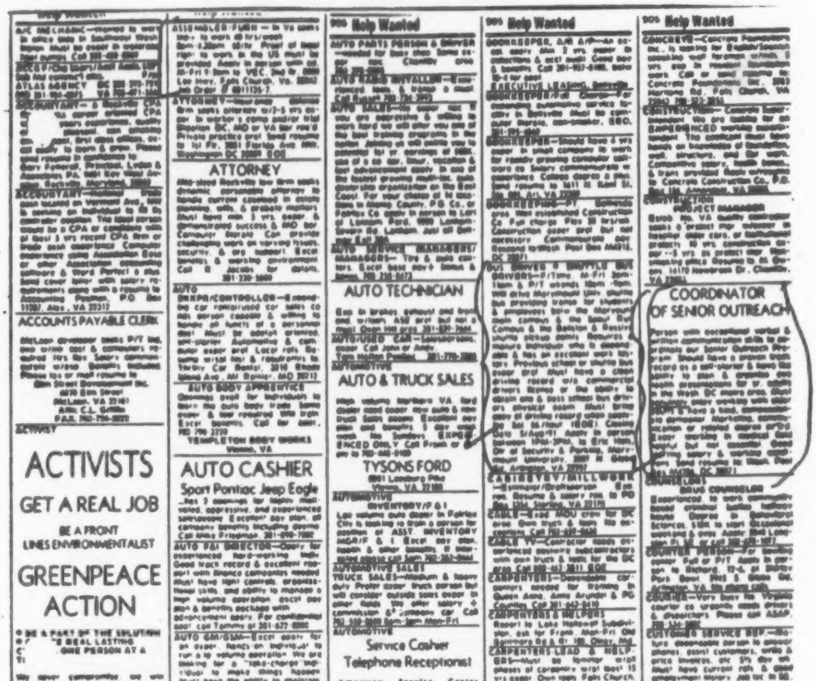
Date

On this review form, the criteria for evaluation include technical factors, work quality, work quantity, reliability, attendance, cooperation, and participation.

Succeeding at Work 111

CASAS Objective 4.1.3 - Identify and use sources of information about job opportunities such as job descriptions and job ads

WANT ADS



Help Wanted

ACCOUNTS PAYABLE CLERK

ACTIVISTS

GET A REAL JOB

BE A FRONT LINES ENVIRONMENTALIST

GREENPEACE ACTION

202-667-7814

CAREER & SUMMER JOBS FOR THE ENVIRONMENT

• Fight Toxic Pollution

• Pass strong recycling laws

Work with U.S. PIRG, the nation's largest & most effective environmental lobby. Rapid advancement. Training provided.

CAPITOL HILL
Kathy, 202-546-9707
COLLEGE PARK
Sandy, 301-927-0035

ATTORNEY

AUTO CASHIER
Sport Pontiac Jeep Eagle

AUTO MECHANIC

Help Wanted

AUTO TECHNICIAN

AUTO & TRUCK SALES

TYSONS FORD

Service Cashier
Telephone Receptionist

703-284-2443

TECHNICIANS

SHEEHY FORD

AUTOMOTIVE

Help Wanted

WORD PROCESSING TRAINEES

• WORD PROCESSING •
•TRAINEES•

Help Wanted

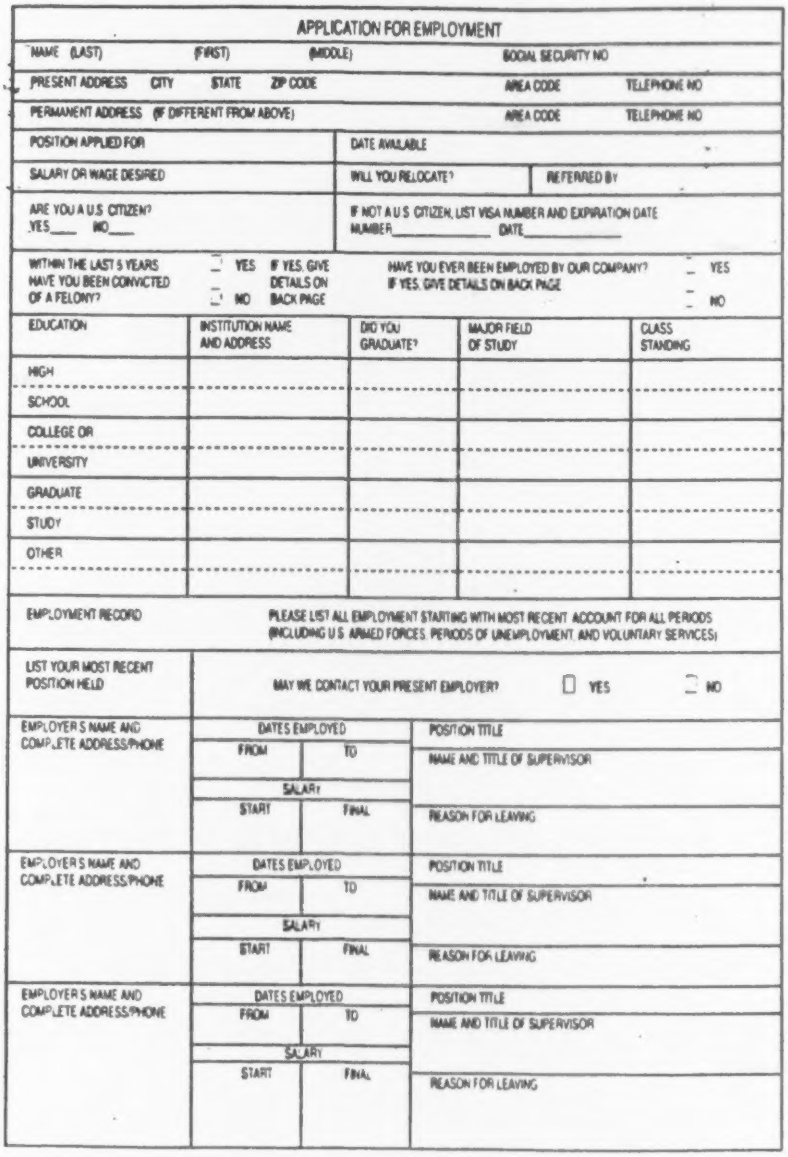
COORDINATOR OF SENIOR OUTREACH

DATA ENTRY

EARN EXTRA MONEY

CASAS Objective 4.1.2 - Interpret job applications, resumes, and letters of application

JOB APPLICATION



APPLICATION FOR EMPLOYMENT

NAME (LAST) (FIRST) (MIDDLE) SOCIAL SECURITY NO

PRESENT ADDRESS CITY STATE ZIP CODE AREA CODE TELEPHONE NO

PERMANENT ADDRESS (IF DIFFERENT FROM ABOVE) AREA CODE TELEPHONE NO

POSITION APPLIED FOR

DATE AVAILABLE

SALARY OR WAGE DESIRED

WILL YOU RELOCATE?

REFERRED BY

ARE YOU A U.S. CITIZEN?
YES___ NO___

IF NOT A U.S. CITIZEN, LIST VISA NUMBER AND EXPIRATION DATE
NUMBER____________ DATE____________

WITHIN THE LAST 5 YEARS HAVE YOU BEEN CONVICTED OF A FELONY? ☐ YES ☐ NO IF YES, GIVE DETAILS ON BACK PAGE

HAVE YOU EVER BEEN EMPLOYED BY OUR COMPANY? IF YES, GIVE DETAILS ON BACK PAGE ☐ YES ☐ NO

EDUCATION	INSTITUTION NAME AND ADDRESS	DID YOU GRADUATE?	MAJOR FIELD OF STUDY	CLASS STANDING
HIGH SCHOOL				
COLLEGE OR UNIVERSITY				
GRADUATE STUDY				
OTHER				

EMPLOYMENT RECORD

PLEASE LIST ALL EMPLOYMENT STARTING WITH MOST RECENT. ACCOUNT FOR ALL PERIODS (INCLUDING U.S. ARMED FORCES, PERIODS OF UNEMPLOYMENT, AND VOLUNTARY SERVICES)

LIST YOUR MOST RECENT POSITION HELD

MAY WE CONTACT YOUR PRESENT EMPLOYER? ☐ YES ☐ NO

EMPLOYER'S NAME AND COMPLETE ADDRESS/PHONE
DATES EMPLOYED: FROM TO
SALARY: START FINAL
POSITION TITLE
NAME AND TITLE OF SUPERVISOR
REASON FOR LEAVING

EMPLOYER'S NAME AND COMPLETE ADDRESS/PHONE
DATES EMPLOYED: FROM TO
SALARY: START FINAL
POSITION TITLE
NAME AND TITLE OF SUPERVISOR
REASON FOR LEAVING

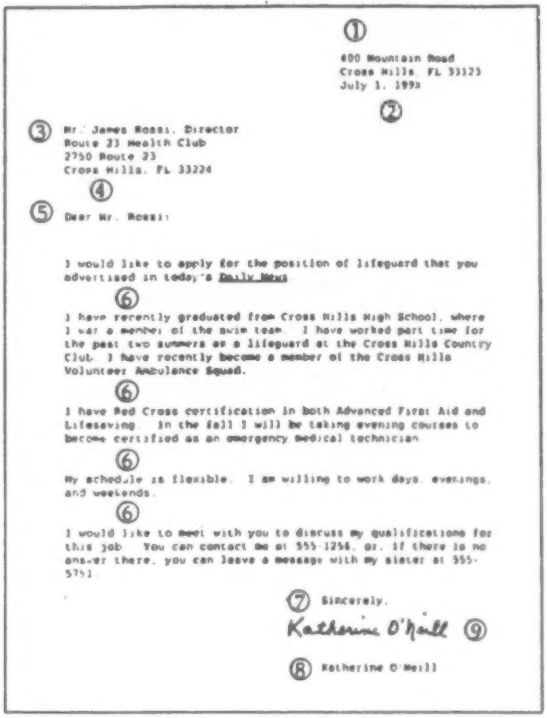
EMPLOYER'S NAME AND COMPLETE ADDRESS/PHONE
DATES EMPLOYED: FROM TO
SALARY: START FINAL
POSITION TITLE
NAME AND TITLE OF SUPERVISOR
REASON FOR LEAVING

BEST COPY AVAILABLE

CASAS Objective 4.1.3 - Identify and use sources of information about job opportunities such as job descriptions and job ads

CASAS Objective 4.1.2 - Interpret job applications, resumes, and letters of application

GUIDELINES FOR APPLICATION LETTERS



①

400 Mountain Road
Cross Hills, FL 33123
July 1, 199x

②

③ Mr. James Rossi, Director
Route 23 Health Club
2750 Route 23
Cross Hills, FL 33224

④

⑤ Dear Mr. Rossi:

I would like to apply for the position of lifeguard that you advertised in today's Daily News.

⑥

I have recently graduated from Cross Hills High School, where I was a member of the swim team. I have worked part time for the past two summers as a lifeguard at the Cross Hills Country Club. I have recently become a member of the Cross Hills Volunteer Ambulance Squad.

⑥

I have Red Cross certification in both Advanced First Aid and Lifesaving. In the fall I will be taking evening courses to become certified as an emergency medical technician.

⑥

My schedule is flexible. I am willing to work days, evenings, and weekends.

⑥

I would like to meet with you to discuss my qualifications for this job. You can contact me at 555-1256, or, if there is no answer there, you can leave a message with my sister at 555-5751.

⑦ Sincerely,

Katherine O'Neill ⑨

⑧ Katherine O'Neill

Use plain, white, 8-1/2 b, 11-inch bond paper and write on only one side.

Type the letter single spaced.

Leave a one-inch margin on the right and left and at the top and bottom of each page.

① Type your address in the upper right corner. Use one line for your street address and the next line for your city, state, and zip code.

② Type the date under the address.

③ Leave two blank lines after the date. Then, on the left side, type the employer's name and business address. Use one line for the person's name and title (or personnel department), the next line for the company name, the next line for the street address, and the next line for the city, state, and zip code.

④ Skip two lines after the employer's address.

⑤ Then, at the left side, type the greeting.

⑥ Within the main part of the letter, skip a line after each paragraph.

⑦ After the main part of the letter, skip a line and type the closing. This is the word or phrase that ends the letter. Closings to use in a business letter include "Sincerely," "Sincerely yours," and "Truly yours." The closing should line up with your address and date.

⑧ Skip four lines after the closing, then type your name so that it lines up with the closing.

⑨ Between the closing and your typed name, neatly sign your name.

CASAS Objective 4.1.5 - Recognize standards of behavior for job interviews and select appropriate questions and responses during job interviews

FREQUENTLY ASKED INTERVIEW QUESTIONS

Here is a list of frequently asked interview questions. In preparing for an interview, it can be helpful to rehearse the answers to these questions.

1. What jobs have you had? What were your responsibilities in these jobs?
2. Why did you leave these jobs?
3. What are your vocational or professional goals?
4. How much schooling do you have? What subjects did you like best?
5. How did you get along with your coworkers in previous jobs?
6. What do you know about our company?
7. Why do you want to work here? Why do you want this position?
8. Why do you think you're qualified for the job?
9. What kind of boss would you like to have?
10. Do you follow directions well?
11. Do you like working with others or by yourself?
12. What are your strengths and weaknesses at work?
13. Are you willing to work overtime? Are you willing to work evenings and weekends?
14. What was your salary on your last job? What salary do you want to earn here?
15. Can you provide references?

In addition, you should be prepared to answer questions specific to the job you are applying for. For example, if you are applying for a position as a receptionist, you may be asked how well you get along with the public. If you are applying for a data entry position, you may be asked how well you handle details.

▼ Practice

On a separate sheet of paper, briefly write the answers to three questions from the list above.

LORAL - CSC

Site: Conference room at Computer Sciences Corporationin Beltsville, MD.

Instructors: TechnicalWriting - Claire McCann
Phonetics - Audrey Parsons

Time: Volunteer
September 26, 1991 - December 9, 1991
Monday and Wednesday
5:30 - 7:30 PM

Instructor Summary:

Workplace Literacy at Loral - Computer Sciences Corporation was unique because the employees were scientifically skilled and college educated. Their workplace needs went beyond basic CASAS guidelines and centered around perfecting oral, aural and written communication skills.

The first night of the course, twenty people came to explore the class. All of them were non-native speakers of English. Most received college degrees in the United States, but indicated a desire to perfect their English. After the first night, the instructors split the class into two sections. On one night the students would work on writing/editing skills with Claire and on the other night practice phonetics, spelling and vocabulary with Audrey.

Enrollment dropped sharply after the first two classes. Audrey and Claire worked together to find out why this happened and discovered several reasons from the remaining students:

- The first reason was that all women dropped out because it was too difficult to work all day and stay an extra 2 hours after work. They had too many family and home obligations, and though they wanted to improve their English, felt the gains were not worth the costs.

- A second reason was that classes were held on a Monday/Thursday schedule. Some employees were already taking Tuesday/Thursday or Monday/Wednesday college credit classes. That meant they automatically missed one class a week, and they told us up front that they would be absent. Soon they discovered they didn't want to be out so many evenings and the English class was dropped. The college classes were for credit, so the decision to drop the literacy class was a logical one.

- Another reason was that all of the employees were professionals who did not always finish work in time for class. Many said they had to stay late for computer access time, team meetings or telephone conferences.

- As the group got smaller, a few others dropped because they felt taking the class indicated they had a "problem". The remaining students indicated that being a non-native speaker of English was in itself difficult in the workplace. They felt attending a class on communication skills drew attention to their difficulties.

The remaining students stayed with the class and seemed highly appreciative of the opportunity to improve both spoken and written skills. Claire and Audrey designed the class to meet the specific requests of these students. The class became unique because it was so individualized. At their educational and professional level, these employees don't get the opportunity to work on pronunciation, idiomatic English usage or more concise and clear ways of writing. Both teachers evaluated the class as productive and a learning experience for them as well. The job required a lot of preparation and constant self-evaluation to make sure the teachers met the employees' needs.

A technical problem arose during the class. On three different occasions the classroom was previously in use. Since it was after hours for most staff, a contact person was not available to help find another location or to inform the teacher of this conflict in advance. The teachers felt they needed someone from Loral or CSC available for evening contact concerning room assignments and to whom they could give and receive some feedback regarding the class.

The teachers learned from this experience and have the following suggestions for the future:

1. Provide as many incentives as possible and feasible. (Possibly work release time around the lunch hour or after work. Rewards for attending class such as memos of support, recognition at workplace meetings, an hour of release time on a Friday afternoon, refreshments, supplies of paper, notebooks, and pencils, etc.

2. Survey potential students to determine the best day or time. Then the instructors could be more flexible in matching that need.

3. Identify specific goals the employees and employer want to accomplish.

4. Have a specific person from management that solicits and gives feedback to the instructors.

In summary, this class proved that there is a need for workplace literacy skills for a population beyond the basic level. There is a growing number of non-native speakers of English in the workplace who are beyond the survival English skills level but who still need and want better English skills. These employees want to advance in their jobs and know they must speak and write better. Because their time is limited, the workplace is an ideal location for classes. Classes for these employees are also beneficial to employers in maintaining a highly skilled and productive workforce.

CASAS Objective 0.1.3 - Identify or use appropriate language in general conversation

ALL LESSONS - PHONETICS

All phonetics lessons were taken from PD's in Depth by Edith Crowell Trager and Essentials of Reading and Writing English, Book Two. All lessons began with a targeted sound. We discussed and demonstrated how to make the sound and then practiced pronouncing word lists. After that we practiced sentences containing the sounds, and then did some dictation with the same sounds. While practicing the word lists we also discussed the definition and syntactical usage of the words. Idiomatic usages were also included.

Targeted sounds included:

j
ch
sh
bl - cl - fl blends
l
f, b, t
b and v initial sounds

Workplace skill - Employees need to enunciate and speak clearly in workplace presentations and with co-workers.

CASAS Objective 4.4.5 - Interpret tasks related to clarifying, giving or providing feedback to instructions; and reacting to criticism

LESSON 1 - WRITING

Objective:

Student will be able to understand the 3 aspects of pre-writing:

1 - analyzing the audience
2 - brainstorming
3 - outlining

Lesson:

Give students "Audience and Purpose Checklist". Discuss with students how often they write, their audience, the purpose of their writing and problems they encounter in the writing process

Workplace skill:

Employees need to understand the process of writing in order to improve.

CASAS Objective 4.4.5 - Interpret tasks related to clarifying, giving or providing feedback to instructions; and reacting to criticism

LESSON 2 - WRITING

Objective:

Student will be able to participate in a brainstorming session and convert ideas generated into an outline.

Lesson:

Discuss and practice outlining in the technical writing process. Also discuss brainstorming in a team workplace setting. Use practice 21 and 22 from pages 60 - 62 of Writing Academic English.

Workplace skill:

Employees need to know how to brainstorm in a team setting to solve problems and create new ideas. Employees need to know how to translate these ideas into a written outline and from there into concrete actions.

In this section you will learn to write a more detailed outline. When you add details to your basic outline, you follow the same principles as before:

1. Indent.
2. Give equivalent details the same kind of number or letter.
3. Use parallel structures.

If you add details to the simple outline above, it will look like this:

Topic Sentence
A. First main supporting point
    1. Specific detail
    2. Specific detail
    3. Specific detail
        a. Further specific detail
        b. Further specific detail
B. Second main supporting point
    1. Specific detail
    2. Specific detail
Concluding Sentence

capital letters

Arabic numbers

small letters

Notice that each smaller detail is indented farther and farther to the right

Notice that each group of points and details consists of at least two items: A an B; 1 and 2; 1, 2, and 3; a and b. The rules of formal outlining require that there b at least two items in a group in order to give them letters and numbers. In othe words, there must be a B if there is an A; there must be a 2 if there is a 1 and so o

Practice 21: Detailed Paragraph Outlining I

A. Complete the outline for the following composition.

Public Transportation in San Francisco

San Francisco has one of the worst public transportation systems in the United St The first problem is that the buses and streetcars are never on schedule. You often ha to wait thirty minutes or more for your bus. Frequently, several buses going in the sa direction arrive at the same time, and then another one may not come for thirty more minutes. Second, maintenance is very poor. The buses and street cars often break dow causing long delays. City officials admit that there is an average of five such breakdowns every day. Furthermore, the buses and streetcars are in terrible condition. The are always dirty, the windows are frequently broken, and the seats are torn. The thir problem is the poor attitude of many of the drivers. They refuse to give information about transfer points, they drive like mad, and they show little consideration for the comfort and safety of their passengers. Recently, a friend of mine was actually injure when the driver of a streetcar closed the doors on his fingers. When you are riding a bus, you feel as if you are being tossed around like a bowl of jello because of the sudd stops and starts. A fourth, and by far the most serious problem is the increase in crim A report from the San Francisco Police Department shows that thefts and assaults ha increased forty-three percent over the three previous months. A few days ago, an old man was killed when he tried to resist a thief. In conclusion, because of all these problems, it is becoming increasingly inconvenient and even dangerous to ride public transportation in San Francisco.

Outline San Francisco has one of the worst public transportation systems in the Uni States.

A. Schedule problems
    1. Long waiting time
    2. Simultaneous bus arrivals

B. Maintenance problems
  1. Breakdowns
    a. Buses and streetcars
    b. Average of five breakdowns per day
  2. Bad condition of buses and streetcars
    a. ______________________________
    b. ______________________________
    c. ______________________________
C. ______________________________
  1. ______________________________
  2. ______________________________
  3. ______________________________
    a. ______________________________
    b. ______________________________
D. ______________________________
  1. ______________________________
  2. ______________________________
In conclusion, ______________________________
____
____

B. Complete the outline for the following composition.

The Confusing English Spelling System

One of the most difficult and confusing aspects of the English language is its spelling system. There is often a discrepancy* between the pronunciation of a word and its spelling. One cannot always tell how to spell a word by its pronunciation nor how to pronounce it by its spelling. For example, there are twelve different ways to spell the sound *sh* in English: *sh*oe, na*t*ion, *sch*ist*, o*c*ean, *s*ure, mi*ss*ion, ma*ch*ine, spe*c*ial, man*s*ion, nau*se*ous, con*sc*ious, and an*x*ious. To give an opposite example, the vowel combination *ou* can be pronounced in at least five different ways, as in the words *through*, *although*, *thought*, *tough*, and *out*.

In order to understand the discrepancies in the English spelling system, it is good to know something about the history of the language. First, it is helpful to realize that English was originally the spoken language of people in England who could neither read nor write. While the uneducated people spoke English, the educated upper classes spoke in French and wrote in Latin. Later, when English became a written language, there was no system for spelling English words. Moreover, the first writers of English were French-speaking scribes* who knew English only slightly; therefore, they carried many French spelling habits into English. In addition, these scribes, who were used to writing in Latin, often inserted letters into words even when they were not pronounced because the corresponding word in Latin was spelled that way. The *b* in *debt* and *doubt*, for example, came from Latin *debitum* and *dubitare*. Finally, the confusion increased when the pronunciation of certain words changed while the spelling remained the same. This is the case with the words *light* and *night*, where the *gh* originally represented a distinct sound.

In conclusion, although it may not improve your spelling, it may soothe your feeling of frustration to know that English spelling is just as difficult for native speakers as it is for foreign learners.

---

discrepancy: difference
scribes: writers, copiers
schist: a crystalline rock

CASAS Objective 4.4.5 - Interpret tasks related to clarifying, giving or providing feedback to instructions; and reacting to criticism

LESSON 3 - WRITING

Objective:

Student will be able to complete and understand exercises that will help them make their own writing clearer, more comprehensive and more coherent.

Lesson:

Use handouts "Techniques for Revising", "Wordy Phrases and Concise Equivalents","Clear and Vague Sentences", and "Fancy Words and Plain Equivalents" from Technical Writing. Have students read and rewrite the examples from the handouts.

Workplace skill:

Employees need to write technical reports clearly, comprehensively, and coherently.

TECHNIQUES FOR REVISING

1. Reread your draft and concentrate on the largest issues: content and organization.

2. Recreate your outline by writing all of your headings in a list. Make sure the headings are in a clear and logical order: remember you are trying to meet the needs of your audience.

3.Reread your draft for accuracy. Have you provided all the necessary data? Is the data correct? Check them against your notes.

4. Have you used an appropriate level of vocabulary for your audience? Have you used consistent terminology throughout and provided a glossary--a list of definitions--if any of your readers will need it?

5. Have you varied your sentences appropriately? Are the sentences grammatically correct? Have you avoided awkward constructions? Are all the words spelled correctly?

6. Give your revised draft to someone else to read. Choose a person who comes close to your eventual reader.Ask them to point out the weak points, unclear passages, sections that need to be added, deleted or revised. If the document is a set of instructions, see if the person can perform the task.

We began our analysis with a heavy, spherical sample.

Following is a list of some of the most commonly used wor phrases and their concise equivalents.

a majority of	most
a number of	some, many
at an early date	soon
at the conclusion of	after, following
at the present time	now
at this point in time	now
based on the fact that	because
despite the fact that	although
due to the fact that	because
during the course of	during
during the time that	during, while
have the capability to	can
in connection with	about, concerning
in order to	to
in regard to	regarding, about
in the event that	if
in view of the fact that	because
it is often the case that	often
it is our opinion that	we think that
it is our understanding that	we understand that
it is our recommendation that	we recommend that
make reference to	refer to
of the opinion that	think that
on a daily basis	daily
on the grounds that	because
prior to	before
relative to	regarding, about
so as to	to
subsequent to	after
take into consideration	consider
until such time as	until

1. BE SPECIFIC

VAGUE
An engine on the plane experienced some difficulty.

CLEAR

VAGUE
The results won't be available for awhile.

Clear

VAGUE
The fire in the laboratory caused extensive damage.

Clear

2. FOCUS ON THE REAL SUBJECT

WEAK
The use of this method would eliminate the problem of motor damage.

Strong

WEAK
The presence of a six-membered lactone ring was detected.

Strong

WEAK
There are many problems that must be worked out.

Strong

WEAK
It is with great pleasure that I welcome you to our annual development seminar.

Strong

3. FOCUS ON THE REAL VERB

WEAK
Each preparation of the solution is done twice.

Strong

WEAK
An investigation of all possible alternatives was undertaken.

Strong

WEAK
Consideration should be given to an acquisition of the properties.

Following is a list of some of the most commonly used [illegible] words and their plain equivalents:

[illegible]	[illegible]
advise	tell
ascertain	learn, find out
attempt (verb)	try
commence	start, begin
demonstrate	show
employ	use
endeavor (verb)	try
eventuate (verb)	happen
evidence (verb)	show
finalize	end, settle, agree
furnish	provide, give
impact (verb)	affect
initiate	begin
manifest (verb)	show
parameters	variables, conditions
perform	do
prioritize	rank
procure	get, buy
quantify	measure
terminate	end, stop
utilize	use

The following example shows how a writer addressing a general audience divided one long paragraph into two:

> High-tech companies have been moving their operations to the suburbs for two main reasons: cheaper, more modern space and a better labor pool. A new office complex in the suburbs will charge anywhere from half to two-thirds of the rent charged for the same square footage in the city. And that money goes a lot further, too. The new office complexes are bright and airy, with picture windows looking out on lush landscaping. New office space is already wired for the computers; and exercise clubs, shopping centers, and even libraries are often on-site.
>
> The second major factor attracting high-tech companies to the suburbs is the availability of experienced labor. Office workers and middle managers are abundant; many suburbanites, especially women returning to the labor force after their children start school, are highly trained and willing to make the short trip to the office complex. In addition, the engineers and executives, who tend to live in the suburbs anyway, are happy to forgo the commuting, the city wage taxes, and the noise and stress of city life.

A strict approach to paragraphing would have required one paragraph, not two, because all the information presented supports the topic sentence that opens the first paragraph. Many readers, in fact, could easily understand a one-paragraph version. However, the writer found a logical place to create a second paragraph and thereby increased the effectiveness of his communication.

Another writer might have approached the problem differently, making each "reason for moving to the suburbs" a separate paragraph.

> High-tech companies have been moving their operations to the suburbs for two main reasons: cheaper, more modern space and a better labor pool.
>
> Office space is a bargain in the suburbs. A new office complex will charge anywhere from half to two-thirds of the rent charged for the same square footage in the city. And that money goes a lot further, too. The new office complexes are bright and airy, with picture windows looking out on lush landscaping. New office space is already wired for the computers; and exercise clubs, shopping centers, and even libraries are often on-site.
>
> The second major factor attracting high-tech companies to the suburbs is the availability of experienced labor. Office workers and middle managers are abundant; many suburbanites, especially women returning to the labor force after their children start school, are highly trained and willing to make the short trip to the office complex. In addition, the engineers and executives, who tend to live in the suburbs anyway, are happy to forgo the commuting, the city wage taxes, and the noise and stress of city life.

Transitional words and phrases help the reader understand a discussion by pointing out the direction the thoughts are following. Here is a list of the most common logical relationships between two thoughts and some of the common transitions that express those relationships:

RELATIONSHIP	TRANSITIONS
addition	also, and, finally, first (second, etc.), furthermore, in addition, likewise, moreover, similarly
comparison	in the same way, likewise, similarly
contrast	although, but, however, in contrast, nevertheless, on the other hand, yet
illustration	for example, for instance, in other words, to illustrate
cause-effect	as a result, because, consequently, hence, so, therefore, thus
time or space	above, around, earlier, later, next, to the right (left, west, etc.), soon, then
summary or conclusion	at last, finally, in conclusion, to conclude, to summarize

In the following examples, the first versions contain no transitional words and phrases. Notice how much clearer the second versions are.

WEAK

Neurons are not the only kind of cell in the brain. Blood cells supply oxygen and nutrients.

IMPROVED

Neurons are not the only kind of cell in the brain. *For example*, blood cells supply oxygen and nutrients.

WEAK

The project was originally expected to cost $300,000. The final cost was $450,000.

IMPROVED

The project was originally expected to cost $300,000. *However*, the final cost was $450,000.

WEAK

The manatee population of Florida has been stricken by an unknown disease. Marine biologists from across the nation have come to Florida to assist in manatee-disease research.

IMPROVED

The manatee population of Florida has been stricken by an unknown disease. *As a result*, marine biologists from across the nation have come to Florida to assist in manatee-disease research.

UNCLEAR

New screening techniques are being developed to combat viral infections. These are the subject of a new research effort in California.

UNCLEAR

The task force could not complete its study of the mine accident. This was the subject of a scathing editorial in the union newsletter.

UNCLEAR

For months the project leaders carefully planned their research. The cost of the work was estimated to be over $200,000. (*What is the work, the planning or the research?*)

CASAS Objective 4.4.5 - Interpret tasks related to clarifying, giving or providing feedback to instructions; and reacting to criticism

LESSON 4 - WRITING

Objective:

Student will be able to write clear, precise directions to enable someone to recreate the drawing they were given.

Lesson:

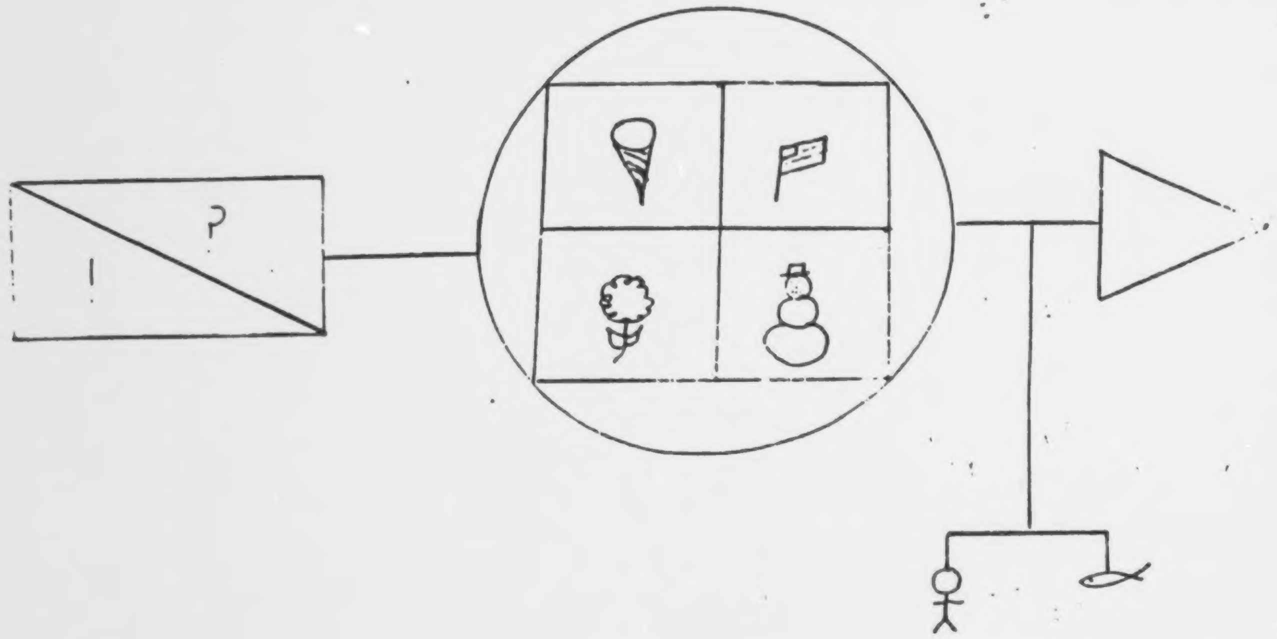
Use handout "Geometric Design" and handout "Prepositions" Appendix 2 from Building English Structures. All students had a copy of the picture except the student at the board. Each student had to give one specific verbal direction so the student at the board could recreate the drawing. Then students wrote a set of clear, precise directions for someone else to follow.

Workplace skill:

Employees need to write directions in a team setting.

1/21/91

All students had a copy of the picture except the student at the board. Each student had give one specific verbal direction so the student at the board could recreate the drawing Then students wrote a set of clear, precise directions for someone else to follow.



APPENDIX 2
PREPOSITION COMBINATIONS

The choice of a preposition is often determined by the verb, adjective, or noun that comes before or after it. In the following sentences the words that determine the prepositions are underlined and in alphabetical order. Use this appendix to test your skills with using these common preposition combinations.

Directions: Cover the answers on the right. Write the prepositions in the blanks. Then check your answers. An *X* means that no preposition should follow the underlined word. Practice the preposition combinations in the sentences until they become automatic for you

How many students were absent ________ class yesterday?

Wearing jeans to a wedding is not acceptable ________ most people.

The parents of Stan accused him ________ neglecting his studies.

Mieko is still not accustomed ________ driving on the right side of the street.

In addition ________ the numerous gifts I won, I also received ten thousand dollars

She is applying for admission ________ that university.

You should take advantage ________ living close to the mountains.

Your laziness does not affect ________ me, but it does affect ____ your grades.

You shouldn't blindly agree ________ everything the professor says.

I know that my sister will like my idea; we agree ________ everything.

I was amazed ________ the weight lifter's strength.

Why are you angry ________ me?

My father used to get annoyed ________ my behavior very often.

You must apologize ________ what you said.

She is applying ________ admission to that university.

The candidate appreciates ________ all the support that he can get.

He doesn't approve ________ smoking.

It is useless to argue ________ a policeman when he stops you for speeding.

I arrived ________ this country two weeks ago.

She arrived ________ the airport 10 minutes ago.

Let's ask ________ Charlie if he is sure of his answer.

I will ask ________ your advice when I need it.

My wife couldn't attend ______ the party because she is working late this evening

Only a few seats were available ______ the general public.

He was late because he wasn't aware ______ the time.

Do you believe ______ ghosts?

Whenever she can't find her clothes, she blames ______ her roommate.

Don't always put the blame ______ others for things that go wrong.

The children were blamed ______ breaking the lamp.

The two-year-old quickly became bored ______ her new puppet.

The teacher knew that Mike was capable ______ doing much better work.

I don't care ______ spaghetti. Could I have something else?

He doesn't seem to care ______ his bad grades.

Try to take care ______ your health.

There is little chance ______ seeing him today.

I will come back ______ your question after I finish this topic.

Her grades are better compared ______ what she received last year.

The man felt compassion ______ his neighbor after she was robbed.

Some people think it is useless to complain ______ bureaucracy.

Water consists ______ oxygen and hydrogen.

They have been considering ______ moving to North Carolina.

I will contact ______ you for an interview next week.

After graduation, she kept in contact ______ her best friend.

She is not content ______ the progress she is making.

Andrea contributed her ideas ______ the discussion.

Do you promise to come? I'm counting ______ you to be there.

Harry solved the problem in the course ______ doing his research.

Jose is crazy ______ soccer; he plays almost every day.

The doctor told him to cut down ______ cigarettes and alcohol.

With all the extra cargo, the ship was in danger ______ sinking.

I have never had to deal ______ such a disagreeable person.

Have you decided ______ a meeting time yet?

The soldiers must be ready to defend ______ the country one day.

The lawyer spoke eloquently in defense ______ her client.

Marcie received a degree ______ sociology last spring.

You can't depend ______ your instincts when you drive on the highways.

The twins differ ______ each other in many ways.

NEW CARROLLTON PUBLIC WORKS

Site: Multipurpose, conference and physical therapy rooms at New Carrollton City Hall.

Instructors:
Phyllis Oarr
Christine Jones
Mary Ellen Butlak

Time:
Work Release - 1 1/2 hours
Volunteer - 1/2 hours
Class 1 & 3 -April 25, 1991 - July 18, 1991
Thursday and Friday
2:00 - 4:00 PM

Class 4 & 5 - July 19, 1991 - September 27, 1991
Thursday and Friday
2:00 - 4:00 PM

Student: Male employees of the City of New Carrollton who perform various services for the city (trash collection, street cleaning, vehicle and building maintenance, pest control, and minor construction).

NEW CARROLLTON PUBLIC WORKS/
High Level Basic Skills

Instructor's Summary:

The upper level skills class was made up of students whose tasks included grass cutting, street repair, trash removal, small scale construction, pest control, work order writing, phone message writing, form completion, and town vehicle maintenance and operation. Skills required to complete these tasks included map reading, giving directions, measurement and the ability to use fractions and decimals and the formulas for perimeter, area, volume, and circumference.

It was imperative for many of the men receive their Commercial Driver's License. We obtained copies of the Maryland Commercial Driver's License Manual and read and discussed sample tests. We also invited a Prince George's County Policeman to present and discuss videos about materials on the test.

Personally, the students wanted more knowledge about banking, budgeting, and borrowing money. A representative from Sovran Bank did a seminar on opening bank accounts, writing checks, and balancing a checkbook and understanding a monthly statement.

Some of the students had health problems. We invited the Health Department to monitor students' blood pressure and talk about preventative medicine. Health Department brochures provided classroom reading material.

Mr. Robbins, the Public Works Director, is extremely interested in promoting three of his men to supervisory positions. He is generously offering to pay for their tuition at Prince George's Community College provided they maintain a "C" in their courses.

Students came to class with the ability to add and subtract whole numbers. A review was needed of multiplication and division facts. Fractions, decimals, percents, and all measurement functions had to be introduced and reinforced. Because of the large amount of "core" material to be taught, most of the curriculum came from "workplace" texts.

From the worksite, we wrote sample business letters, and work orders, and filled in forms. Map skills were practiced using a map of New Carrollton and other maps.

We used hazardous material worksheets as reading material.

The three men who were slated for Prince George's Community College were more confident after the class.

NEW CARROLLTON PUBLIC WORKS/
Low LevelBasic Skills

Instructor Summary:

This was a heterogeneous class comprised of male adults with varying basic skill competencies, each with a personal goal for self-improvement in reading, writing, spelling, and math skills, and each hoping to enhance both job performance and self esteem. Students followed an individualized learning plan, progressed at their own pace and used a variety of materials (teacher-made, printed, audio-visual) and techniques appropriate for skill levels and job-related needs. Guest speakers added another dimension to the curriculum. Students enjoyed the oral presentations and the opportunity to participate in a question/answer session with "an expert on the topic" as well as to receive written information on banking, health, and the CDL Test (Commercial Driver's License - a job requirement for some of them).

During each class, students worked on improving reading, writing, spelling, and math skills relative to their respective jobs. Two students needed to learn to read the names of the streets they travelled daily on their trash pick-up routes. They recognized their routes by landmarks but could not read street signs and could easily become lost. Often they simply drove through the neighborhood until they found what they were looking for and recognized where they were. Directions for them were "this way or that way" and "up the hill" or "down the hill" rather than right or left or north, south, east and west. Thus, these students worked on learning the names of New Carrollton City streets, recognition and understanding of road signs, and map skills.

Students also wanted to learn to read and write names of "special pick-up items" (sofa, T.V., stove, sink) and words telling where these items would be located (on the curb, beside the garage, in front of the house). In addition, they wanted to learn to read and write memos related to "special pick-up " assignments. When they could demonstrate the ability to do this, they might get a job promotion and salary increase.

Some students worked on studying and reviewing information they needed to know to pass the CDL Test in order to obtain their Commercial Driver's License. These students were greatly helped in this area by a County policeman who spoke to them, showed video tapes, answered questions, and offered tips on how and what to study.

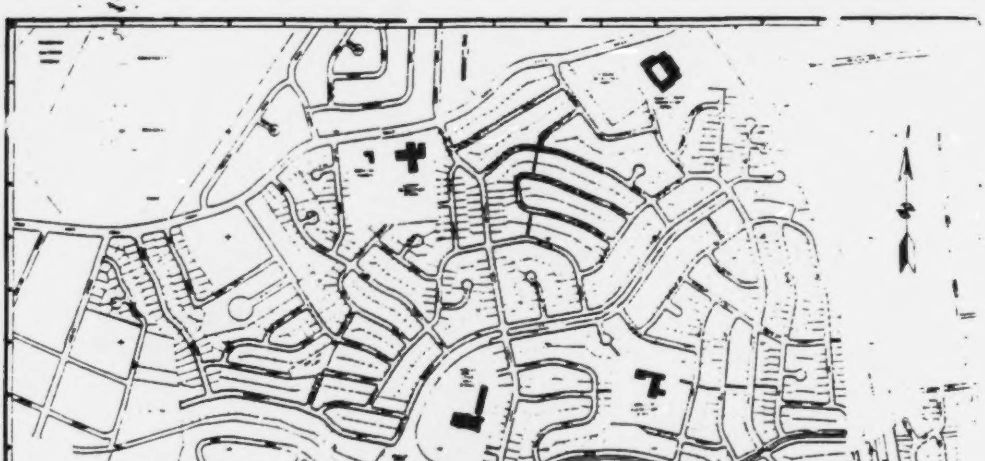
Some students needed to learn to read, add, subtract, and record numbers so they could keep records of truck mileage and the amount of gasoline used each day. Other students worked on improving skills in multiplication, division, fractions, decimals, and percents and applied them in solving job related problems. A new and satisfying experience for all of the students was learning how to use a calculator. They had always been afraid to try and didn't want to ask anyone to show them to use one. One man bought a calculator the day after we worked on it in class and he showed others how to use it.

Students also worked on activities related to time management, completing and interpreting various forms, health benefits, utilizing community resources, attitudes, and what it takes to be a good employee.

Attendance was good and by the end of classes students were pleased with their progress, and felt good about themselves, but were disappointed classes were ending. They were given information and encouraged to enroll in Prince George's County Adult Basic Education classes to continue improving their skills.

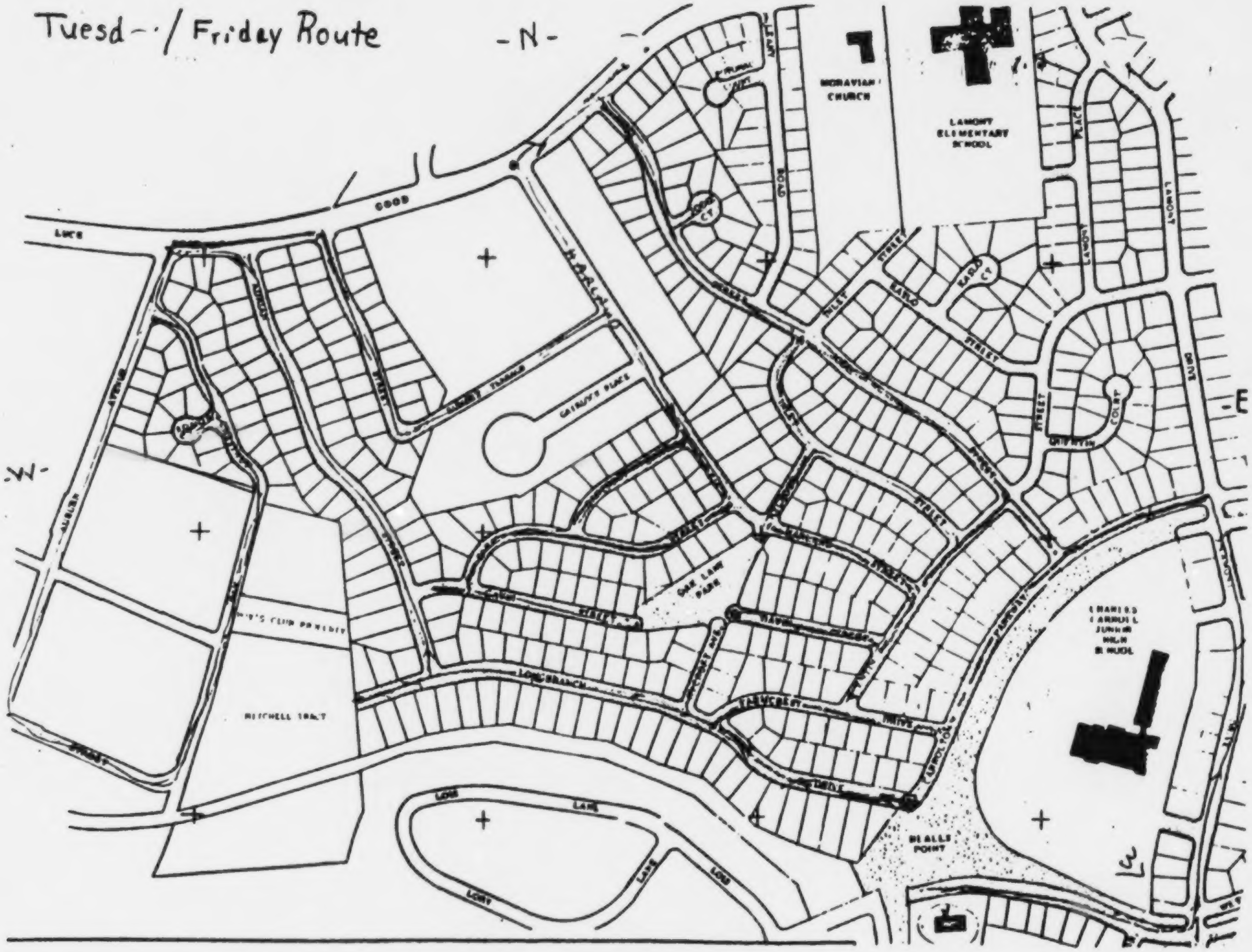
CASAS Objective 1.1.3 - Interpret maps and graphs
CASAS Objective 2.2.5 - Use maps relating to travel needs
CASAS Objective 1.9.4 - Interpret maps
CASAS Objective 2.2.1 - Ask for, give, follow, or clarify directions

NEW CARROLLTON MAP ROUTE


STREET DIRECTORY
CITY OF
NEW CARROLLTON
PRINCE GEORGE'S COUNTY
MARYLAND
1973
INCORPORATED IN 1953
1970 POPULATION 14,870

BEST COPY AVAILABLE

Tuesd--/ Friday Route

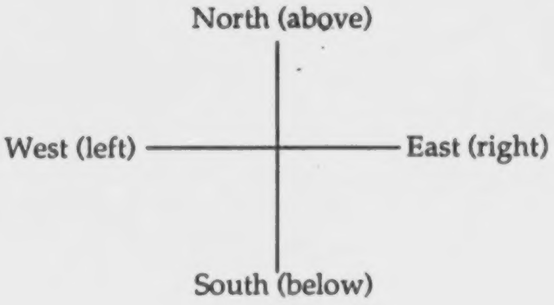

-N-
-W-
-E
GOOD
LUCE
MORAVIAN CHURCH
LAMONT ELEMENTARY SCHOOL
LAMONT DRIVE
OAK LAWN PARK
LONG BRANCH
MITCHELL TRACT
LONG LANE
BEALLS POINT
CHARLES CARROLL JUNIOR HIGH SCHOOL
CARROLTON
PARKWAY

CASAS Objective 1.1.3 - Interpret maps and graphs
CASAS Objective 2.2.5 - Use maps relating to travel needs
CASAS Objective 1.9.4 - Interpret maps
CASAS Objective 2.2.1 - Ask for, give, follow, or clarify directions

REVIEWING DIRECTIONS

Use your map of New Carrollton that shows your Tuesday/Friday route. Write the direction word in the blank.

north east south west



1. Charles Carroll Junior High School is _________ of Lamont Elementary School.
2. Oak Lane Park is ______ of the Boys Club property.
3. Lamont Drive goes ______ and ________.
4. Bealls Point is _______ of the Public Works Dept.
5. Longbranch Drive is ________ of Good Luck Road.
6. Moravian Church is ________ of Leahy Road.
7. Mitchell Tract is __________ of Charles Carroll Junior High School.
8. Longbranch Drive and Farmcrest Drive go _________ and __________.
9. If you turn onto Adrian Street from Good Luck Road, you are traveling ____________.
10. If you turn left on to Lamont Drive from Carrollton Parkway, you are going _________.

CASAS Objective 1.1.3 - Interpret maps and graphs
CASAS Objective 2.2.5 - Use maps relating to travel needs
CASAS Objective 1.9.4 - Interpret maps
CASAS Objective 2.2.1 - Ask for, give, follow, or clarify directions

I. Write the names for the 4 directions.

II. Write the direction word in the sentence. Use your map of New Carrollton.

1. Westbrook Drive is _________ of Riverdale Road.
2. Your "shop" is __________ of Lamont Drive.
3. Lamont Drive goes ________ and ________.
4. Legation Road goes _______ and ________.
5. The library is ________ of Westbrook Drive.
6. New Carrollton Recreation Center is ______ of Mentana Drive.
7. New Carrollton Mall is _______ of Legation Road.
8. Carrollton Terrace Apts. are __________ of the New Carrollton Mall.
9. Carrollton Elementary School is __________ of Charles Carroll Junior High School.

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CASAS Objective 1.1.3 - Interpret maps and graphs
CASAS Objective 2.2.5 - Use maps relating to travel needs
CASAS Objective 1.9.4 - Interpret maps
CASAS Objective 2.2.1 - Ask for, give, follow, or clarify directions

TUESDAY/FRIDAY ROUTE

Write in ABC order

Westbrook Drive
Lamont Drive
Verona Drive
Larchwood Street
Carrollton Parkway
Ravenswood Road
Stanwood Street
Quintana Street
Fremont
Fairbanks Street
Sprague Place
Caswell Place
Cathedral Avenue
Malissa Street
Donoghue Drive
Good Luck Road

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________
8. ____________________
9. ____________________
10. ____________________
11. ____________________
12. ____________________
13. ____________________
14. ____________________
15. ____________________
16. ____________________

Write the abbreviation

Road ____________
Street ____________
Avenue ____________
Drive ____________
Court ____________
Parkway ____________
Place ____________

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

CASAS Objective 1.1.3 - Interpret maps and graphs
CASAS Objective 2.2.5 - Use maps relating to travel needs
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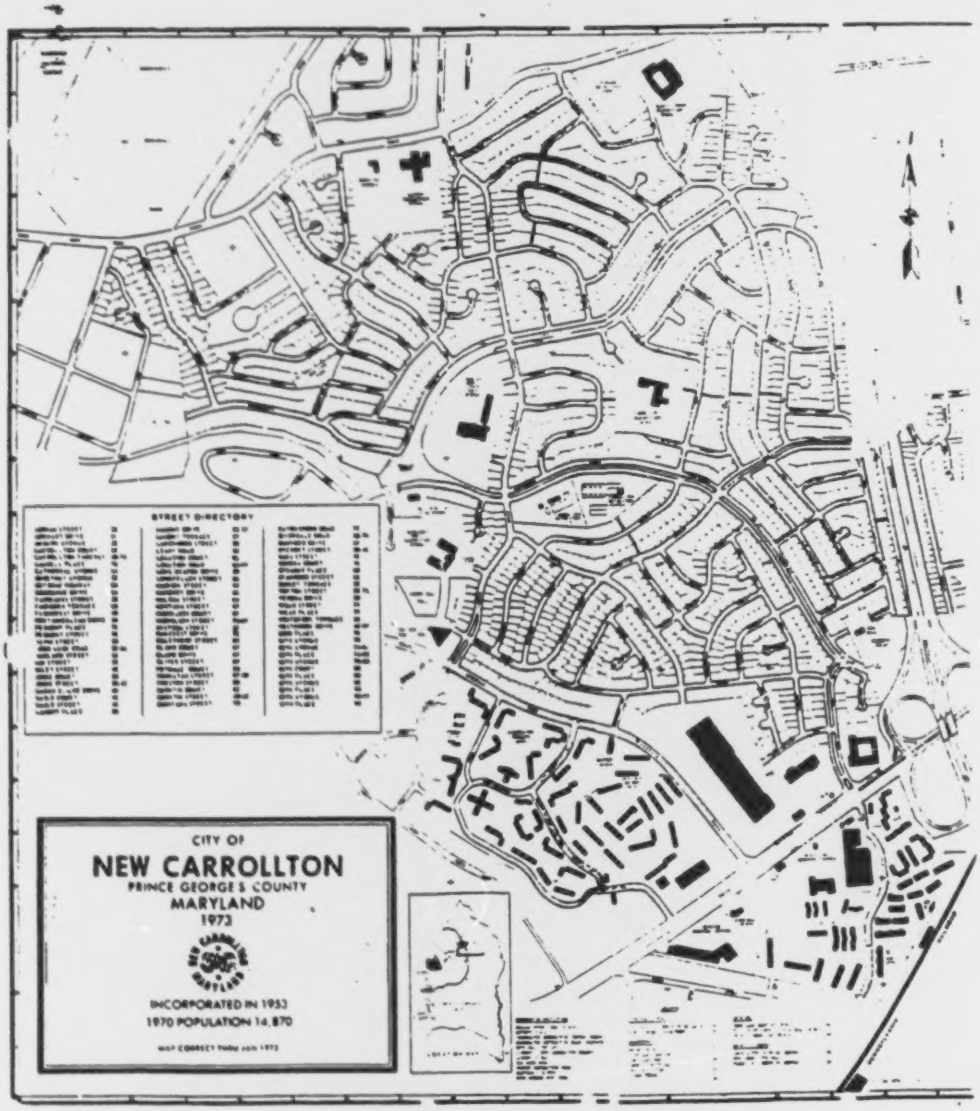
MAP


STREET DIRECTORY
CITY OF
NEW CARROLLTON
PRINCE GEORGE'S COUNTY
MARYLAND
1973
INCORPORATED IN 1953
1970 POPULATION 14,870
MAP CORRECT THRU JAN 1973

CASAS Objective 1.1.3 - Interpret maps and graphs
CASAS Objective 2.2.5 - Use maps relating to travel needs
CASAS Objective 1.9.4 - Interpret maps
CASAS Objective 2.2.1 - Ask for, give, follow, or clarify directions

Objective: To become familiar with the streets on a refuse collecting route.

1. Using a transparency of the map of New Carrollton highlight refuse collection routes.
2. Have each student highlight individual maps.
3. Write the directions from the Public Works Facility.

ZEP MANUFACTURING COMPANY
FIRST IN MAINTENANCE PRODUCTS

MATERIAL SAFETY DATA SHEET

11/09/9

AND SAFE HANDLING AND DISPOSAL INFORMATION

PAGE 1 OF

ISSUE DATE 04/23/90 ZEP KLEAR
SUPERSEDES 07/12/89 PRODUCT NUMBER: 0629

SECTION I - EMERGENCY CONTACTS

ZEP MANUFACTURING COMPANY
P O BOX 2015
ATLANTA, GEORGIA 30301

TELEPHONE (404)352-1680 BETWEEN 8:00 AM-5:00 PM (EST)
NON-OFFICE HOURS, WEEKENDS, AND HOLIDAYS: AREA CODE 404
435-2973, 996-0899, 351-2952, 971-3367, 432-2873
LOCAL POISON CONTROL CENTER ....

TRANSPORTATION EMERGENCY

CHEMTREC TOLL FREE 1-800-424-9300 ALL CALLS RECORDED
DISTRICT OF COLUMBIA (202)483-7616 ALL CALLS RECORDED

SECTION II - HAZARDOUS INGREDIENTS

DESIGNATIONS	TLV (PPM)	EFFECTS (SEE REVERSE)	% IN PROD.
@** METHANOL ** methyl alcohol, wood alcohol, columbia spirits; CAS# 67-56-1; RTECS# PC1400000, OSHA PEL-200 PPM, OSHA/ACGIH STEL-250 PPM	200	TOX IRR FBL	> 90

@ IDENTIFIES CHEMICALS LISTED UNDER SARA-SECTION 313 FOR RELEASE REPORTING.

SPECIAL NOTE: ADVERSE HEALTH EFFECTS WOULD NOT BE EXPECTED UNDER RECOMMENDED CONDITIONS OF USE SO LONG AS PRESCRIBED SAFETY PRECAUTIONS ARE PRACTICED.

SECTION III - HEALTH HAZARD DATA

ACUTE EFFECTS OF OVEREXPOSURE:
THIS PRODUCT IS TOXIC VIA INHALATION, INGESTION, AND SKIN ABSORPTION. POISONING OCCURS BY CENTRAL NERVOUS SYSTEM (CNS) DEPRESSION. SYMPTOMS OF CNS DEPRESSION INCLUDE: STUPOR, DRUNKENNESS, HEADACHE, AND ULTIMATELY RESPIRATORY ARREST AND UNCONSCIOUSNESS. TEMPORARY OR PERMANENT BLINDNESS MAY FOLLOW IN 2-6 DAYS. TOXIC CONCENTRATIONS MAY ACCUMULATE WITHOUT WARNING SINCE EYE IRRITATION AND ODOR DETECTION ONLY OCCUR AT VERY HIGH CONCENTRATIONS.

ZEP

ZEP MANUFACTURING COMPANY
FIRST IN MAINTENANCE PRODUCTS

MATERIAL SAFETY DATA SHEET

AND SAFE HANDLING AND DISPOSAL INFORMATION

PAGE 2 OF 3
ISSUE DATE 04/23/[illegible] ZEP KLEAR
SUPERSEDES 07/12/85 PRODUCT NUMBER: 0629

SECTION III - HEALTH HAZARD DATA (CONTINUED)

CHRONIC EFFECTS OF OVEREXPOSURE.
CHRONIC AND SUBACUTE EXPOSURE TO THIS MATERIAL PREDOMINANTLY AFFECTS THE CENTRAL NERVOUS SYSTEM. SYMPTOMS OBSERVED MAY BE THE SAME AS THOSE FOR ACUTE OVEREXPOSURE AND MAY INCLUDE, VISUAL DISTURBANCES, ATAXIA, STAGGERING GAIT, WEAKNESS, TREMORS, VERTIGO, DROWSINESS, CONFUSION, PERSONALITY CHANGES, DIFFICULTY IN SPEECH, AND BLURRED VISION PROGRESSING TO COMPLETE BLINDNESS. THESE SYMPTOMS MAY BE DELAYED IN ONSET AND MAY CONTINUE FOR SOME TIME AFTER EXPOSURE HAS STOPPED.
METHANOL IS ELIMINATED FROM THE BODY VERY SLOWLY. THEREFORE DAILY EXPOSURE CAN HAVE CUMULATIVE EFFECTS INCLUDING OPTIC NERVE DAMAGE.
NONE OF THE HAZARDOUS INGREDIENTS ARE LISTED AS CARCINOGENS BY IARC, NTP, & OSHA

EST'D PEL/TLV. 200 PPM PRIMARY ROUTES OF ENTRY: INH, SKIN, ING.

HMIS CODES. HEALTH 2, FLAM 4, REACT 0, PERS PROTECT B ; CHRONIC HAZ. YES

FIRST AID PROCEDURES:
SKIN : IMMEDIATELY FLUSH CONTAMINATED SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION IMMEDIATELY.
EYES : IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, OCCASIONALLY LIFTING UPPER AND LOWER LIDS. GET MEDICAL ATTENTION AT ONCE.
INHALE: MOVE EXPOSED PERSON TO FRESH AIR AT ONCE. IF BREATHING HAS STOPPED, PERFORM ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION IMMEDIATELY.
INGEST: IF SWALLOWED, INDUCE VOMITING BY GIVING TWO GLASSES OF WATER AND STICKING FINGER DOWN THROAT. CALL A PHYSICIAN IMMEDIATELY.

SECTION IV - SPECIAL PROTECTION INFORMATION

PROTECTIVE CLOTHING : WEAR NEOPRENE, NITRILE, OR NATURAL RUBBER GLOVES OR GLOVES WITH PROVEN RESISTANCE TO THE INGREDIENTS LISTED.
EYE PROTECTION : USE TIGHT-FITTING, SPLASH-PROOF SAFETY GOGGLES. CONTACT LENSES SHOULD NOT BE WORN WHEN HANDLING THIS MATERIAL.
RESPIRATORY PROTECTION: IF VENTILATION IS INADEQUATE, WEAR A PROPERLY FITTING MSHA OR OSHA-APPROVED RESPIRATOR.
VENTILATION : VENTILATION SHOULD BE EQUIVALENT TO OUTDOORS. USE EXHAUST FANS AND OPEN WINDOWS IN ENCLOSED SPACES.

SECTION V - PHYSICAL DATA

BOILING POINT (F)	: 150F	SPECIFIC GRAVITY	: 0.80
VAPOR PRESSURE(MMHG):	APPROX. 96MM	PERCENT VOLATILE BY VOLUME (%)	99.9%
VAPOR DENSITY(AIR=1):	1.11	EVAPORATION RATE(N-BUTYL ACETAT =1):	3.5
SOLUBILITY IN WATER	: COMPLETE	PH(CONCENTRATE)	: N/A
		PH(USE DILUTION OF):	8.5-9.5

APPEARANCE AND ODOR : A THIN, BLUE LIQUID WITH A FAINT ODOR

SECTION VI - FIRE AND EXPLOSION DATA

FLASH POINT(F) (METHOD USED): 61F (TOC)
FLAMMABLE LIMITS LEL 7.3 UEL 8.6
EXTINGUISHING MEDIA : WATER, CO2
SPECIAL FIRE FIGHTING: FIRE EXPOSED DRUMS SHOULD BE COOLED WITH STREAM OF WATER
UNUSUAL FIRE HAZARDS : SEE ABOVE

MATERIAL SAFETY DATA SHEET

AND SAFE HANDLING AND DISPOSAL INFORMATION

ISSUE DATE: 04/23/90 ZEP KLEAR
SUPERSEDES 07/13/89 PRODUCT NUMBER: 0629

TION VII - REACTIVITY DATA

ABILITY STABLE
COMPATIBILITY(AVOID) : HEAT, SUNLIGHT, STRONG OXIDIZERS, AND ACIDS
YMERIZATION : WILL NOT OCCUR.
ZARDOUS DECOMPOSITION CARBON DIOXIDE AND CARBON MONOXIDE

CTION VIII - SPILL AND DISPOSAL PROCEDURES

EPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
MEDIATELY ELIMINATE ALL FLAME, IGNITION AND HIGH-HEAT SOURCES. ABSORB SPILL INERT ABSORBENT MATERIAL (eg ZEP-O-ZORB). PICK UP AND PLACE RESIDUE IN A EAN, D.O.T. SPECIFICATION CONTAINER FOR DISPOSAL. WASH AREA THOROUGHLY WITH A TERGENT SOLUTION AND RINSE WELL WITH WATER.

STE DISPOSAL METHOD:
QUIDS CANNOT BE SENT TO LANDFILLS UNLESS SOLIDIFIED. UNUSABLE PRODUCT AND LLECTED, SPENT MATERIAL MAY REQUIRE DISPOSAL AS A HAZARDOUS WASTE AT A PERMIT-D TREATMENT/STORAGE/DISPOSAL FACILITY. SOLVENT WASTES MAY REQUIRE TREATMENT MEET THE APPROPRIATE STANDARDS BEFORE DISPOSAL IN A CHEMICAL OR INDUSTRIAL STE LANDFILL. CONSULT LOCAL, STATE, AND FEDERAL AGENCIES FOR PROPER DISPOSAL THOD IN YOUR AREA.

RA HAZ. WASTE NOS.: D001 (SEE ABOVE)

CTION IX - SPECIAL PRECAUTIONS

ECAUTIONS TO BE TAKEN WHEN HANDLING AND STORING:
AMMABLE! STORE AND USE AWAY FROM HEAT, SPARKS, OPEN FLAME, AND ANY SOURCE OF NITION.
ORE TIGHTLY CLOSED CONTAINER IN A DRY AREA AT TEMPS. BETWEEN 40-120 DEGREES F.
EP PRODUCT AWAY FROM SKIN AND EYES.
NOT BREATHE SPRAY MISTS OR VAPORS.
OTHING OR SHOES WHICH BECOME CONTAMINATED WITH SUBSTANCE SHOULD BE REMOVED OMPTLY AND NOT REWORN UNTIL THOROUGHLY CLEANED.
EP OUT OF THE REACH OF CHILDREN.

CTION X - TRANSPORTATION DATA

T PROPER SHIPPING NAME
OMPOUND, CLEANING, LIQUID
T HAZARD CLASS: FLAMMABLE LIQUID
I.D. NUMBER : NA1993 DOT LABEL/PLACARD: FLAMMABLE
TSCA CHEMICAL INVENTORY - ALL INGREDIENTS ARE LISTED.
A CWA 40CFR PART 117 SUBSTANCE(RQ IN A SINGLE CONTAINER): NONE

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CASAS Objective 1.9.4 - Interpret maps
CASAS Objective 6.6.5 - Interpret scale drawings

Objective: To determine distances between sites in New Carrollton using the mileage scale.

The mileage scale on the New Carrollton map is 1 inch =1 mile. Using this scale and your ruler find the distance between:

1. New Carrollton Library and New Carrollton Mall
2. Charles Carroll Junior High School and Lamont Elementary School
3. City Hall and New Carrollton Public Works Dept.
4. Robert Frost Elementary School and Carrollton Elementary School

CASAS Objective 4.3.2 - Interpret work safety manuals and related publications

Objective: To become familiar with vocabulary on a Material Safety Data Sheet.

1. Under Section III find the words that mean the same as:

   a. poisonous
   b. breathing
   c. swallowing
   d. stopping
   e. irregular walk
   f. shaking of the body
   g. a condition where someone feels as if he is whirling
   h. something that causes cancer

2. If methanol touches your skin or eyes how long should the area be flushed with water?

3. If someone has stopped breathing during exposure, list the steps to be followed.

4. What should be worn to protect your hands and eyes?

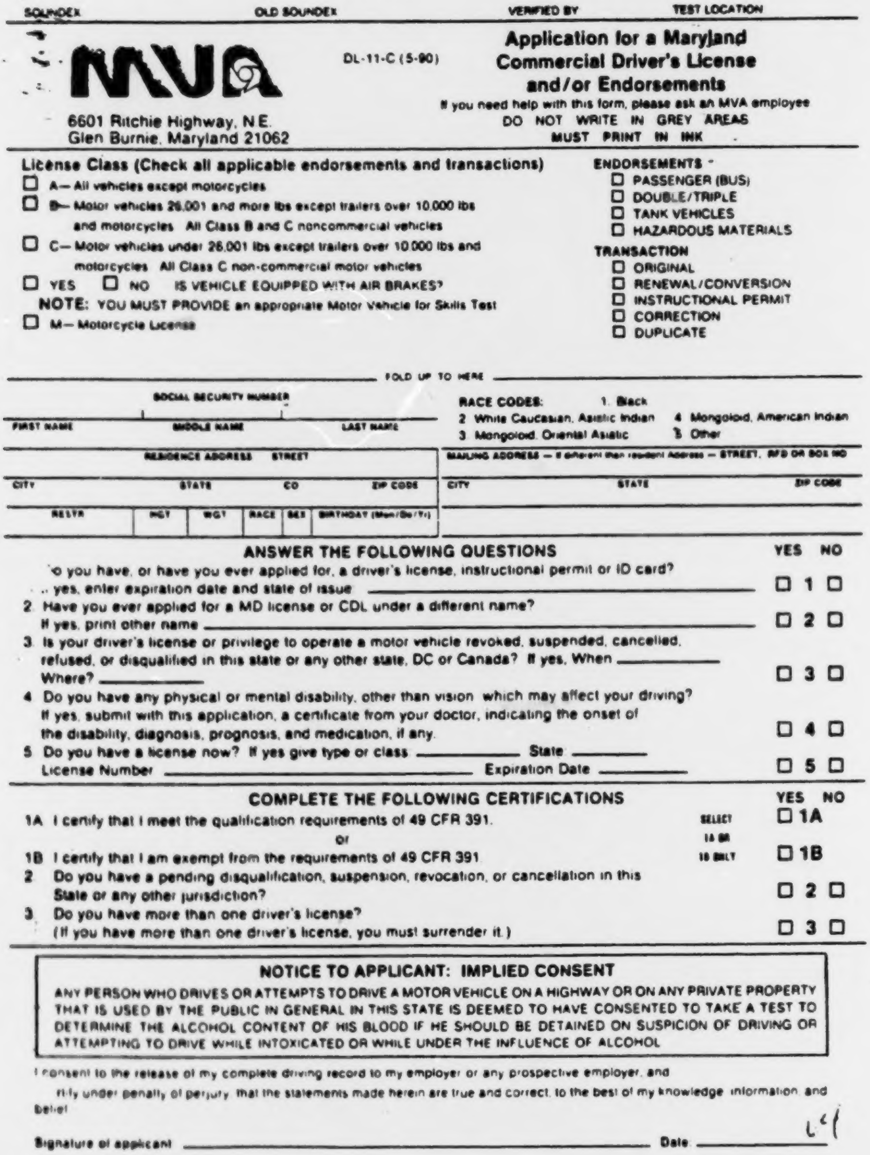
5. If you cannot ventilate your work area, what should you breathe through?

6. Number the following steps in the order they should be taken should the methanol be spilled.

   ___ wash area with a detergent solution
   ___ pick up and place residue in a can
   ___ eliminate all flame, ignition and high heat sources
   ___ rinse well with water

CASAS Objective 2.5.7 - Interpret permit and license requirements
CASAS Objective 4.4.2 - Identify appropriate skills and education for keeping a job and getting a promotion

COMMERCIAL DRIVER'S LICENSE APPLICATION



SOUNDEX OLD SOUNDEX VERIFIED BY TEST LOCATION

MVA
6601 Ritchie Highway, N.E.
Glen Burnie, Maryland 21062

DL-11-C (5-90)

Application for a Maryland Commercial Driver's License and/or Endorsements

If you need help with this form, please ask an MVA employee
DO NOT WRITE IN GREY AREAS
MUST PRINT IN INK

License Class (Check all applicable endorsements and transactions)

- ☐ A— All vehicles except motorcycles
- ☐ B— Motor vehicles 26,001 and more lbs except trailers over 10,000 lbs and motorcycles. All Class B and C noncommercial vehicles
- ☐ C— Motor vehicles under 26,001 lbs except trailers over 10,000 lbs and motorcycles. All Class C non-commercial motor vehicles
- ☐ YES ☐ NO IS VEHICLE EQUIPPED WITH AIR BRAKES?

NOTE: YOU MUST PROVIDE an appropriate Motor Vehicle for Skills Test

- ☐ M— Motorcycle License

ENDORSEMENTS

- ☐ PASSENGER (BUS)
- ☐ DOUBLE/TRIPLE
- ☐ TANK VEHICLES
- ☐ HAZARDOUS MATERIALS

TRANSACTION

- ☐ ORIGINAL
- ☐ RENEWAL/CONVERSION
- ☐ INSTRUCTIONAL PERMIT
- ☐ CORRECTION
- ☐ DUPLICATE

FOLD UP TO HERE

SOCIAL SECURITY NUMBER

FIRST NAME MIDDLE NAME LAST NAME

RACE CODES: 1. Black
2 White Caucasian, Asiatic Indian
3 Mongoloid, Oriental Asiatic
4 Mongoloid, American Indian
5 Other

RESIDENCE ADDRESS STREET

CITY STATE CO ZIP CODE

RESTR HGT WGT RACE SEX BIRTHDAY (Mon/Da/Yr)

MAILING ADDRESS — if different than resident Address — STREET, RFD OR BOX NO

CITY STATE ZIP CODE

ANSWER THE FOLLOWING QUESTIONS

	YES		NO
Do you have, or have you ever applied for, a driver's license, instructional permit or ID card? If yes, enter expiration date and state of issue ______	☐	1	☐
2 Have you ever applied for a MD license or CDL under a different name? If yes, print other name ______	☐	2	☐
3 Is your driver's license or privilege to operate a motor vehicle revoked, suspended, cancelled, refused, or disqualified in this state or any other state, DC or Canada? If yes, When ______ Where? ______	☐	3	☐
4 Do you have any physical or mental disability, other than vision which may affect your driving? If yes, submit with this application, a certificate from your doctor, indicating the onset of the disability, diagnosis, prognosis, and medication, if any.	☐	4	☐
5 Do you have a license now? If yes give type or class ______ State ______ License Number ______ Expiration Date ______	☐	5	☐

COMPLETE THE FOLLOWING CERTIFICATIONS

		YES		NO
1A I certify that I meet the qualification requirements of 49 CFR 391.	SELECT	☐	1A	
or	1A OR			
1B I certify that I am exempt from the requirements of 49 CFR 391	1B ONLY	☐	1B	
2 Do you have a pending disqualification, suspension, revocation, or cancellation in this State or any other jurisdiction?		☐	2	☐
3 Do you have more than one driver's license? (If you have more than one driver's license, you must surrender it.)		☐	3	☐

NOTICE TO APPLICANT: IMPLIED CONSENT

ANY PERSON WHO DRIVES OR ATTEMPTS TO DRIVE A MOTOR VEHICLE ON A HIGHWAY OR ON ANY PRIVATE PROPERTY THAT IS USED BY THE PUBLIC IN GENERAL IN THIS STATE IS DEEMED TO HAVE CONSENTED TO TAKE A TEST TO DETERMINE THE ALCOHOL CONTENT OF HIS BLOOD IF HE SHOULD BE DETAINED ON SUSPICION OF DRIVING OR ATTEMPTING TO DRIVE WHILE INTOXICATED OR WHILE UNDER THE INFLUENCE OF ALCOHOL

I consent to the release of my complete driving record to my employer or any prospective employer, and

certify under penalty of perjury that the statements made herein are true and correct, to the best of my knowledge, information and belief

Signature of applicant ______ Date ______

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CASAS Objective 4.4.2 - Identify appropriate skills and education for keeping a job and getting a promotion

CDL REQUIREMENT TEST

CMVSA/86 - CDL Requirements Test

Study each question carefully and then indicate your choice by drawing a circle around the letter you have chosen.

1. The "P" endorsement (PASSENGER VEHICLE) is required if:
   A. the driver transports 15 or more passengers, including the driver.
   B. the driver operates a vehicle designed to transport more than 15 persons, including the driver.
   C. operates a passenger bus for hire.
   D. the driver transports passengers more than 6 months of the year.

2. The new BAC (Blood Alcohol Concentration) level is:
   A. .10
   B. .07
   C. .04
   D. .05

3. If you operate a tractor-trailer tanker, which is air-brake equipped, you will be required to take:
   A. tank Vehicle and Hazardous Material endorsements.
   B. tank Vehicle, Air Brake, and Combination endorsements.
   C. tank Vehicle, Air Brake, Combination, and Hazardous Material endorsements
   D tank Vehicle, Air Brake, Combination endorsements, and the General Knowledge Test.

4. The penalty for operating a commercial vehicle without a CDL can be as high as:
   A. $2,500
   B. $5,000
   C. $10,000
   D. $500

5. The Commercial Motor Vehicle Safety Act of 1986 requires that if you are convicted of traffic violation (except parking) you must notify your employer within how many days after the conviction?
   A. 10
   B. 15
   C. 30
   D. 45

6. You must have the Hazardous Materials endorsement if:
   A. you transport Hazardous Material on a regular basis.
   B. you haul Hazardous Material only in a tractor-trailer.
   C. you haul Hazardous Material in such a quantity that Hazardous Material placards are required.
   D. you haul Hazardous Material only on a full-time basis.

7. You have never received the Hazardous Material endorsement. When can you haul Hazardous Material legally?
   A. when the load does not require a placard
   B. never
   C. only as long as you drive intrastate
   D. only during daylight hours

8. You will lose your CDL for one year upon the first conviction of which of the following:
   A. you drive a commercial motor vehicle under the influence of alcohol or a controlled substance (drugs).
   B. you leave the scene of an accident involving a commercial motor vehicle you were driving.
   C. you used a commercial motor vehicle to commit a felony.
   D. all of the above

9. If you are convicted a second time for driving under the influence of drugs, you will lose your license for:
   A. one year.
   B. three years.
   C. five years.
   D. lifetime.

10. If you are stopped by the authorities and your BAC is less than .04, but you have any detectable amount, you will:
   A. be suspended for 30 days.
   B. be placed out-of-service for 24 hours.
   C. lose your license for 60 days.
   D. lose your license for 3 years.

CASAS Objective 1.8.1 - Demonstrate the use of savings and checking accounts

CASAS Objective 1.8.2 - Interpret the procedures and forms associated with banking services

Objective: To become familar with a bank register

1. Today is January 15. You have written a check for $48.93 to Sears for a clothing purchase. Enter this transaction in your register using check 01.
2. On January 21 you realize your balance is not sufficient to cover upcoming expenses. You call the bank to make a transfer from your savings account to checking for $350.00.
3. January 23 the bank automatically deducts your car payment of $142.62. You have chosen this method of payment for your convenience and expect this deduction each month.
4. It's near the end of the month, January 29. Check # 02 will pay rent to Watergate Apartments in the amount of $200.00.
5. January 31 is payday. You wish to deposit your entire check for $283.52 plus $25.00 in cash.
6. The evening of February 3 you are short on cash but need groceries. You go to the nearest Cash Flow Teller and withdraw $30.00.
7. February 4 you receive your monthly statement. The ending balance that you see on your statement should agree with your balance on your checkbook balance. *Refer to the "easy" method to balance your account.

Record the above transactions into the register below

HOW TO USE THIS REGISTER . . .

This handy register has been carefully designed for you to make entries and statement reconciliations easily and efficiently

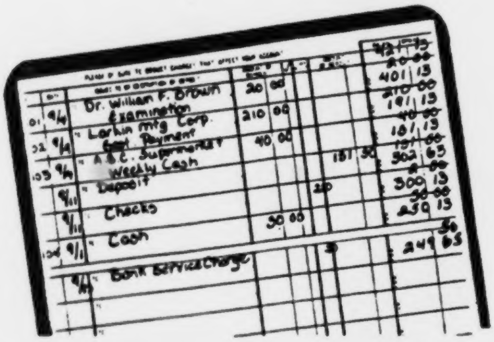
To the right is an example for using this handy register NOTE the amounts in the payment and deposit columns may be omitted

✓ **COLUMN** — Use this symbol when reconciling your statement for items posted. You can see at a glance outstanding items and amounts

OTHER DEDUCT — Use this column to deduct any charges that affect your account

The special tax rate feature in the back of the register provides fast, accurate itemizing of expenditures for tax reporting purposes

Savings entries may be posted in the back of this register if applicable to your account and for your convenience, an automatic deposit payment reminder is located inside the back cover



Dr. William F. Brown
Examination
Larkin Mfg Corp.
Payment
A.B.C. Supermarket
Weekly Cash
Deposit
Checks
Cash
Bank Service Charge
401 13
191 13
161 13
302 63
300 13
250 13
249 63

PLEASE BE SURE TO DEDUCT CHARGES THAT AFFECT YOUR ACCOUNT

NO	DATE	ISSUED TO OR DESCRIPTION OF DEPOSIT	AMOUNT OF PAYMENT	✓	[illegible]	AMOUNT OF DEPOSIT	BALANCE FORWARD
							50 11
		TO					
		TO					
		TO					
		TO					
		TO					
		TO					
		TO					

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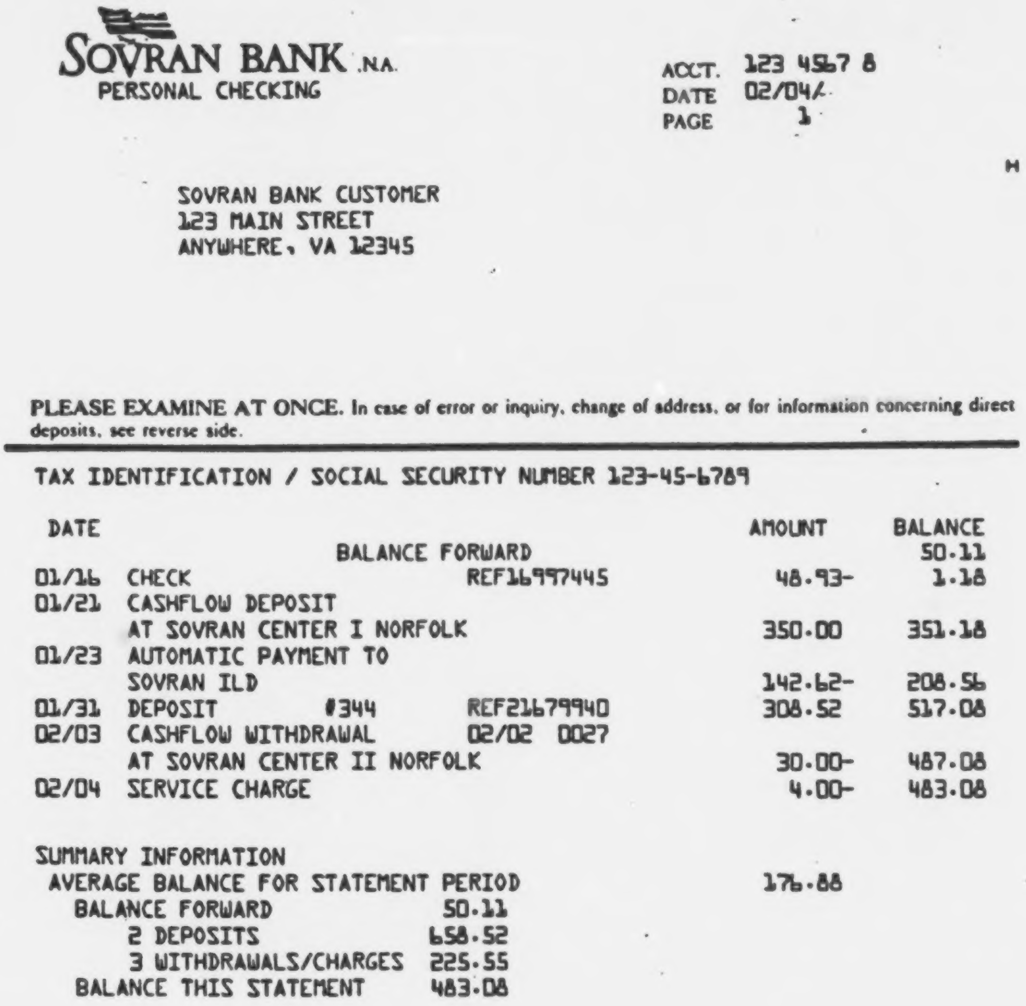
Objective : To become familiar with reconciling a bank statement

Using your bank register and the following monthly statement, follow the steps to reconciling your monthly statement



SOVRAN BANK .N.A.
PERSONAL CHECKING

ACCT. 123 4567 8
DATE 02/04/
PAGE 1

H

SOVRAN BANK CUSTOMER
123 MAIN STREET
ANYWHERE, VA 12345

PLEASE EXAMINE AT ONCE. In case of error or inquiry, change of address, or for information concerning direct deposits, see reverse side.

TAX IDENTIFICATION / SOCIAL SECURITY NUMBER 123-45-6789

DATE			AMOUNT	BALANCE
	BALANCE FORWARD			50.11
01/16	CHECK	REF16997445	48.93-	1.18
01/21	CASHFLOW DEPOSIT			
	AT SOVRAN CENTER I NORFOLK		350.00	351.18
01/23	AUTOMATIC PAYMENT TO			
	SOVRAN ILD		142.62-	208.56
01/31	DEPOSIT #344	REF21679940	308.52	517.08
02/03	CASHFLOW WITHDRAWAL	02/02 0027		
	AT SOVRAN CENTER II NORFOLK		30.00-	487.08
02/04	SERVICE CHARGE		4.00-	483.08

SUMMARY INFORMATION

AVERAGE BALANCE FOR STATEMENT PERIOD		176.88
BALANCE FORWARD	50.11	
2 DEPOSITS	658.52	
3 WITHDRAWALS/CHARGES	225.55	
BALANCE THIS STATEMENT	483.08	

Change of Address

Number and Street _______________ Date Change Effective

City, State and Zip Code _______________ Phone No.

Type(s) of acct.(s) maintained and acct. no.

☐ Regular Savings ☐ Checking ☐ Charge Card ☐ Instalment Loan

☐ All American ☐ Certificate ☐ Safe Deposit ☐ Trust & Investment

_______________ Customer's Signature

Clip off on dotted line and forward to the branch where your checking account is maintained.

- -

You can easily Balance your Checkbook by following this procedure

Fill in below amounts from your Checkbook and Bank Statement

Balance shown on bank statement $ ________

Add deposits not on statement $ ________

____

____

Total $ ________

Subtract checks issued but not on statement

$ ________

____

____

____

____

____

____

____

____

____

____

Total $ ________

Balance ________

Balance shown in your checkbook $ ________

Add any deposits not already entered in checkbook $ ________

____

____

____

Total $ ________

Subtract service charges and other bank charges not in checkbook

$ ________

____

____

Total $ ________

Balance ________

In case of Error or Inquiry, contact your nearest branch or call us at one of the numbers below.

For Direct Deposit Information, or in case of errors or questions about your Electronic Transfer, contact your nearest branch or call us collect within the State of Virginia at:

Direct Inquires to:

Tidewater Area:
P. O. Box 600
Norfolk, Virginia 23501
(804) 441-4211

Northern Virginia Area:
P. O. Box 10375
Alexandria, Virginia 22310
(703) 892-3640

Richmond Area & Southside Va. Areas
P. O. Box 27025
Richmond, Virginia 23261
(804) 780-2823

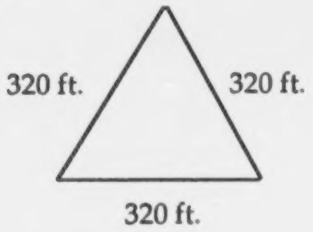
Charlottesville Area:
P. O. Box 1328
Charlottesville, Virginia 22902
(804) 977-2159

Abingdon Area
P. O. Box 917
Abingdon, Virginia 24210
(703) 628-9116 Ext. 229

CASAS Objective 6.6.2 - Recognize, use, and measure linear dimensions, geometric shapes, or angles
CASAS Objective 6.6.7 - Solve measurement problems in stipulated situations

Objective: To solve construction problems using perimeter

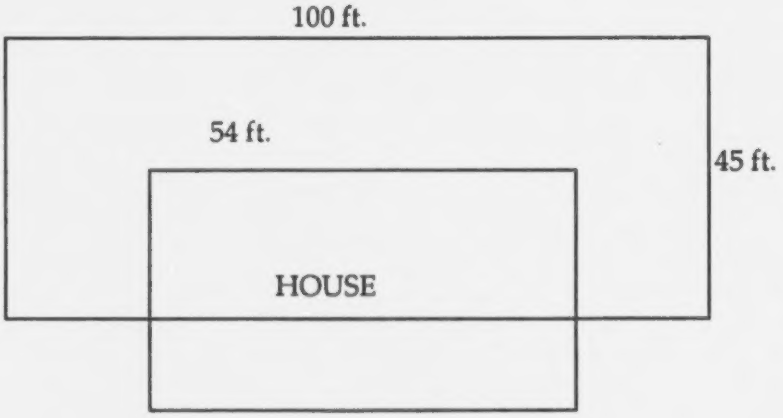
1. How many linear feet of fencing must be purchased to enclose a ball field that has the following shape?



2. How many feet of baseboards are needed in a room that measures 20 feet by 16 feet? Subtract a total of 5 feet for doorways.

3. At 12 cents a foot, how much will weather stripping around a window 34 by 56 inches cost?

4. How many feet of fencing are needed to fence this yard?



CASAS Objective 6.6.3 - Measure area and volume of geometric shapes

Objective: To solve problems using area

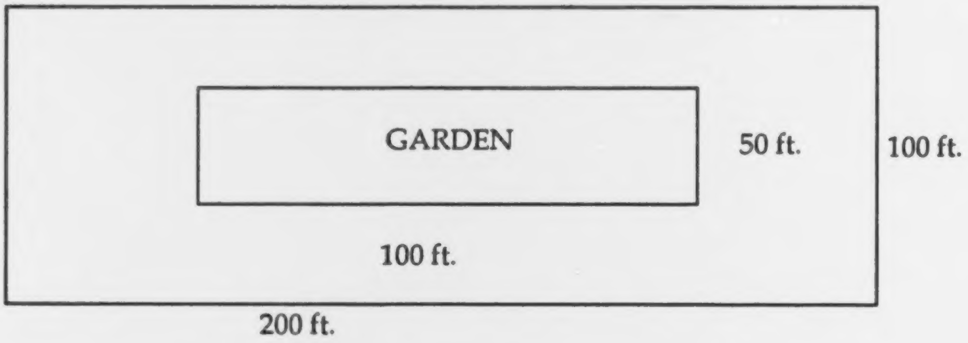
1. How many square feet of carpet are needed for a hallway 34 feet long and 9 feet wide?

2. How many square feet will a sign painter have painted on a billboard 12 feet by 8 feet?

3. Allowing one hundred square feet for each tree, how many trees can be planted in an orchard 320 feet by 200 feet?

4. The town needs to sod the soccer field. How many square feet of sod are needed to cover an area 150 feet by 100 feet?

5. The town will plant grass around the Memorial Garden. One and one-half pounds of seed will cover 1,000 square feet. Using the measurements below, find how many pounds of seed are needed.



CASAS Objective 6.6.3 - Measure area and volume of geometric shapes

Objective: To solve problems using volume

1. How much topsoil is needed to cover a lot 110 feet by 80 feet to a depth of 4 inches?
2. How much dirt is removed for a basement 60 ft. long, 35 feet wide and 8 feet deep?
3. How many cubic feet of concrete are needed to replace a sidewalk 4 feet long, 3 feet wide and 1/3 foot deep?
4. How many cubic meters of water are needed to fill a swimming pool 20 meters long, 10 meters wide and 3 meters deep?
5. At $1.50 a cubic foot, what will be the price to pour a foundation 100 feet long by 75 feet wide by 1/2 foot deep?
6. The parking lot at the Community Center needs to be repaved. How many cubic feet of asphalt are needed to cover an area 105 yd. wide, 165 feet long and 1/2 foot deep?

PRINCE GEORGE'S HOSPITAL CENTER

Site: Classroom located in the Education Wing of Prince George's Hospital Center.

Instructor: Thomas Bullock

Time: Work Release - 1 1/2 hours
December 4, 1991 - January 17, 1992
Wednesday and Friday
8:30 - 10:30 PM

Student: Employees from all departments of the hospital: billing, records, patient transport, dietary, emergency room, and nurses.

Instructor Summary:

The educational objectives in the Workplace Literacy Program, at Prince George's Hospital Center, offered students a broad overview of reading, math, and communication skills relevant to a health care environment. We began with the CASAS Employability Tests as an assessment of the students' abilities. Much of the instructional material used was acquired from each department of the hospital. Materials included request forms, patient statistic forms, employee handbooks, and medical dictionaries. Many of the subjects covered focused on job related applications and career usefulness.

The students came from different departments of the hospital. As a homework assignment, the students were asked to think of a project they would like to undertake as a class. This project was to affect the hospital and combine reading, writing, math, and communication skills. The students chose to implement a hospital-wide recycling program. This project proved to be one of the major accomplishments of the course. For the recycling project, students had to do such things as research the need, write business letters, contact County officials, do a cost analysis, and meet formally with department directors and hospital officials.

A strong effort was made to provide enrichment and challenge to advanced students, as well as to provide remediation, review, and individualized instruction to those whose skills needed assistance. Other instructional techniques used were games, group discussion, group problem solving, written assignments, and handouts. Students gained very strong appreciation for many of the topics covered through the instruction given, the project, the usefulness to their job, and their cooperative work with one another.

CASAS Objective 5.1.5 - Interpret information about special interest groups

RECYCLING WASTE REDUCTION

December 18

What type of materials are thrown away?

Who is currently doing waste hauling? Could they do recycling plus provide containers?

Is it plausible to separate containers throughout a central collection containers.

Where is the Prince George's recycling office.

How much can be recycled?

How much can be paper?

How much corrugated cardboard?

Go to the procurement office to see if recycling request was mailed out, thrown away, or filed.

January 3, 1992

Prince George's Hospital Center
3001 Hospital Drive
Cheverly, Maryland 20784

Mr. Joe Sedlock
Commercial Recycling Specialist
Office of Recycling
39400 Indlewood Peppercorn Place
Suite 520
Landover, MD 20785

Dear Mr. Sedlock:

As a class project we are interested in developing a recycling program at our hospital.

We would like to set up and appointment to have you speak with us regarding this matter. Our class meets every Wednesday and Friday from 8:30 AM - 10:30 AM in room H-310.

Thank you,

Eva Briscoe, LPN

CASAS Objective 5.1.5 - Interpret information about special interest groups

Prince George's Hospital Center
3001 Hospital Drive
Cheverly, MD 20784
January 3, 1992

Ms. AlstonThomas
Director of Recycling
Georgetown University

Dear Ms. Thomas:

Our class would like to thank you for the information you gave our instructor, Tom Bullock regarding the developing of a recycling program at our hospital. At this time we are gathering information to present a format of the plan to our Chief Administrator, Mr. Atzerott.

We would like to confirm your visit for January 24, 1992 at 8:30 AM. We meet in room H-310 of the main building.

Sincerely yours,

Carolyn Allen
Dispatcher

CASAS Objective 6.7- Interpret data from graphs or compute averages

WHERE DOES TIME GO

Outcome: To illustrate, using graphs, how a student's workday is spent.

Objectives:

1. The student will be able to read, interpret and create bar graphs, line graphs, and pie charts.
2. The student will be able to record activities and times on a chart.
3. The student will be able to compute percentages.

Duration: Four one hour class periods.

Materials:

Samples of various types of graphs and charts
Blank graphs, graph paper, and charts
Table for recording information
Rulers

Lesson Development:

1. Review and explain the sample graphs and charts.
2. Have students bring in other samples found in newspapers, workplace charts, etc.
3. Have students record the various activities they perform throughout the workday in the chart.
4. Record the times at which the activity was started and ended.
5. Subtract the times and record the duration time of each activity.
6. Day 2: Have students transfer this information onto a bar graph and plot activity vs. duration time.
7. Day 3: Have students transfer the information onto a line graph and plot the time of day vs. activity.
8. Day 4: Have students transfer information onto a pie chart that shows the percentage of time each activity took in relation to the total length of the work day.

Developed by:

Thomas Bullock
Prince Georges Workplace Literacy
(202) 882-3667

CASAS Objective 4.2.4 - Interpret employee handbook

MY JOB

LESSON: MY JOB

Outcome: The student will become more familiar with their job and more acquainted with the regulations and procedures of their department.

Objectives:

1. To read and interpret procedures and regulations related to a job.
2. To ask questions of unclear interpretations, guidelines, and/or procedures.
3. To write suggestions that would contribute to a more efficient workplace environment.

Duration: Two one hour classes.

Materials: Copies of the employee handbook
Copies of departmental manuals

Lesson Development:

1. Ask students what they are suppose to do in case of (something they would probably not be familiar with in the handbook).
2. Explain that there are many regulations, procedures, as well as BENEFITS that they may not be aware of.
3. Look through the table of contents. Have students circle items they are not familiar with.
4. Read and make notes on those sections.
5. Invite the Employee Relations director to speak to the class and answer questions.

Developed by: Thomas Bullock
Prince Georges Workplace Literacy
(202) 882-3667

Employee Benefits At

DIMENSIONS HEALTH CORPORATION

A not-for-profit community health system.

PRINCE GEORGE'S HOSPITAL CENTER
3001 Hospital Drive Cheverly, MD 20785 (301) 341-2123

GLADYS SPELLMAN NURSING CENTER
2900 Mercy Lane Cheverly, MD 20785 (301) 341-3350

BOWIE HEALTH CENTER
15001 Health Center Drive Bowie, MD 20716 (301) 262-5511

GREATER LAUREL BELTSVILLE HOSPITAL
7100 Contee Road Laurel, MD 20707 (301) 497-7905

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SUMMARY

BENEFIT	WHO PAYS	WHO IS ELIGIBLE	WHEN ELIGIBLE	WHAT YOU RECEIVE
Vision Insurance	Hospital & Employee	FT & PTR Employees	First of month following employment	Vision care insurance with a schedule of payment for contact lenses or glasses
Prescription Insurance	Hospital & Employee	FT & PTR Employees	First of month following employment	Prescriptions filled at a reduced cost
Life Insurance & AD&D	Hospital	FT Employees	Immediately	Twice annual salary rounded down to nearest thousand, plus additional $5,000 in the event of accidental death or dismemberment
		PTR Employees		Life Insurance—½ of FT benefit AD&D—Same as FT
Pension Plan	Hospital	FT & PTR Employees	After 5 yrs of service (min. of 1,000 hrs worked per yr)	Income upon retirement (amount is based on length of service and actuarial factors)
Tax Sheltered Annuity	Employee	FT & PTR Employees	Immediately	Voluntary retirement plan offers tax free earnings and investment opportunity
Health Examination	Hospital	All Employees	Upon employment	Pre-employment physical
			Once per year (at PGHC)	Health screenings, blood pressure checks, and flu vaccinations
Pharmacy Discount	Hospital & Employee	FT & PTR Employees	Immediately	Prescription drugs at cost plus 10%
Hospital Discounts at PGHC	Hospital & Employee	FT & PTR Employees	Immediately	Discounts on hospital and dental clinic charges
Cafeteria Discount	Hospital & Employee	All Employees	Immediately	Discount on all food purchases
Credit Union	Employee	All Employees	Immediately	Direct deposit, checking, savings and loan services
Tuition Reimbursement	Hospital	FT Employees	After completion of 520 regular paid hrs	Reimbursement of tuition cost for job related course work. Subject to provisions of the Plan.
		FT-RN Employees	After 6 months	
		PTR-RN Employees	After 2 yrs	
Parking	Hospital	All Employees	Immediately	Free parking on outside lots; and discounted rates for parking garage at PGHC
Child Care Center at PGHC	Employee	All Employees	Immediately—based on availability	Day care for children ages 3 mos to 6 yrs

NOTE: All benefits are governed by Dimensions Health Corporation policies.

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BENEFITS

BENEFIT	WHO PAYS	WHO IS ELIGIBLE	WHEN ELIGIBLE	WHAT YOU RECEIVE
Vacation (Annual Leave)	Hospital	FT Employees	Accrual begins on date of employment. May be used after completion of 520 regular paid hours	0-3 yrs = 4 hrs per pay period (13 days per yr) 4-15 yrs = 6 hrs per pay period (19.5 days per yr) 16 + yrs = 8 hrs per pay period (26 days per yr)
		PTR Employees		Pro-rated in proportion to the number of hrs worked in a pay period
Holidays	Hospital	FT Employees	Immediately for fixed holidays; Floating Holidays, end of calendar quarter following completion of probation.	6 fixed per yr - New Years, Memorial Day, July 4, Labor Day, Thanksgiving, Christmas. Plus 4 floating holidays
		PTR Employees		½ FT rate (4 hrs per Holiday)
		PTR-RN Employees		Pro-rated in proportion to the number of hrs worked
Sick Leave	Hospital	FT Employees	Accrual begins on date of employment. May be used after completion of 520 regular paid hours	15 days per yr with unlimited accrual
		PTR Employees		Pro-rated in proportion to the number of hrs worked in a pay period
Incentive Leave	Hospital	FT & PTR Employees	After completion of 1040 clocked hrs if 16 hrs or less of sick leave (paid or unpaid) or LWOP used	8 hrs of Annual Leave
Personal Leave	Hospital	FT & PTR Employees	After completion of 520 regular paid hours	F.T.—8 hrs/yr as needed PTR—4 hrs/yr as needed
Civil Leave	Hospital	FT & PTR Employees	Immediately	Time off with pay to serve jury duty
Military Leave	Hospital	FT Employees	After completion of 520 regular paid hours	Up to 15 days off with pay for Military duty
Workers' Compensation	Hospital	All Employees	Immediately	Employer will provide all benefits due pursuant to Md. Workers' Compensation Law
Worker's Compensation Disability Leave	Hospital	FT & PTR Employees	Immediately	Full salary for up to 90 days for temporary total disability provided qualifications are met
Health Insurance	Hospital & Employee	FT & PTR Employees	First of month following employment	Comprehensive group medical insurance coverage
Dental Insurance	Hospital & Employee	FT & PTR Employees	First of month following employment	Preventive & basic dental coverage

FT = Full-time; PTR = Part-time Regular; FT-RN = Full-time Registered Nurse, PTR-RN = Part-time Regular Registered Nurse

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CASAS Objective 5.1.6- Communicate one's opinions on a current issue
CASAS Objective 2.8 - Use published or broadcast information

LESSON DEAR EDITOR

Outcome: To write a letter to the editor of a newspaper, respond to a memo, or other article.

Objectives:
1. To read and interpret a newspaper article, workplace memo, or workplace related article.
2. To write information in a clear, logical, and complete manner.
3. To write a business letter or memo.

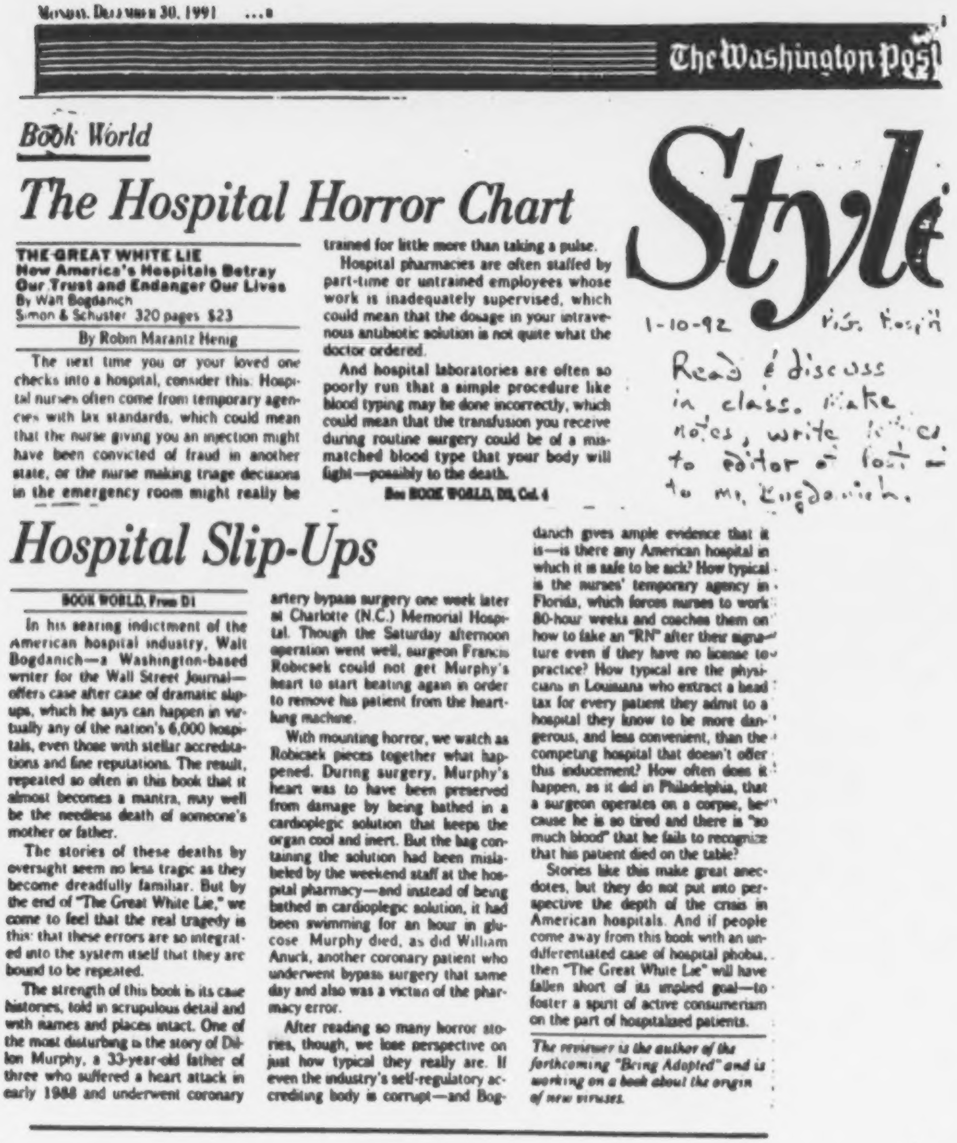
Duration: One one hour class.

Materials: Handouts on how to write a business letter or memo

Newspaper article, workplace memo.

Lesson Development:
1. Read and discuss a current newspaper article related to health care.
2. Make notes of opinions.
3. Draft, edit and write letters to the editor.

Developed by: Thomas Bullock
Prince Georges Workplace Literacy
(202) 882-3667



Monday, December 30, 1991 ...B

The Washington Post

Book World

Style

1-10-92 V.S. Hosp'l

Read é discuss in class. Make notes, write letter to editor of Post + to Mr. Bogdanich.

The Hospital Horror Chart

THE GREAT WHITE LIE
How America's Hospitals Betray Our Trust and Endanger Our Lives
By Walt Bogdanich
Simon & Schuster 320 pages $23

By Robin Marantz Henig

The next time you or your loved one checks into a hospital, consider this: Hospital nurses often come from temporary agencies with lax standards, which could mean that the nurse giving you an injection might have been convicted of fraud in another state, or the nurse making triage decisions in the emergency room might really be trained for little more than taking a pulse.

Hospital pharmacies are often staffed by part-time or untrained employees whose work is inadequately supervised, which could mean that the dosage in your intravenous antibiotic solution is not quite what the doctor ordered.

And hospital laboratories are often so poorly run that a simple procedure like blood typing may be done incorrectly, which could mean that the transfusion you receive during routine surgery could be of a mismatched blood type that your body will fight—possibly to the death.

See BOOK WORLD, D3, Col. 4

Hospital Slip-Ups

BOOK WORLD, From D1

In his searing indictment of the American hospital industry, Walt Bogdanich—a Washington-based writer for the Wall Street Journal—offers case after case of dramatic slip-ups, which he says can happen in virtually any of the nation's 6,000 hospitals, even those with stellar accreditations and fine reputations. The result, repeated so often in this book that it almost becomes a mantra, may well be the needless death of someone's mother or father.

The stories of these deaths by oversight seem no less tragic as they become dreadfully familiar. But by the end of "The Great White Lie," we come to feel that the real tragedy is this: that these errors are so integrated into the system itself that they are bound to be repeated.

The strength of this book is its case histories, told in scrupulous detail and with names and places intact. One of the most disturbing is the story of Dillon Murphy, a 33-year-old father of three who suffered a heart attack in early 1988 and underwent coronary artery bypass surgery one week later at Charlotte (N.C.) Memorial Hospital. Though the Saturday afternoon operation went well, surgeon Francis Robicsek could not get Murphy's heart to start beating again in order to remove his patient from the heart-lung machine.

With mounting horror, we watch as Robicsek pieces together what happened. During surgery, Murphy's heart was to have been preserved from damage by being bathed in a cardioplegic solution that keeps the organ cool and inert. But the bag containing the solution had been mislabeled by the weekend staff at the hospital pharmacy—and instead of being bathed in cardioplegic solution, it had been swimming for an hour in glucose. Murphy died, as did William Anuck, another coronary patient who underwent bypass surgery that same day and also was a victim of the pharmacy error.

After reading so many horror stories, though, we lose perspective on just how typical they really are. If even the industry's self-regulatory accrediting body is corrupt—and Bogdanich gives ample evidence that it is—is there any American hospital in which it is safe to be sick? How typical is the nurses' temporary agency in Florida, which forces nurses to work 80-hour weeks and coaches them on how to fake an "RN" after their signature even if they have no license to practice? How typical are the physicians in Louisiana who extract a head tax for every patient they admit to a hospital they know to be more dangerous, and less convenient, than the competing hospital that doesn't offer this inducement? How often does it happen, as it did in Philadelphia, that a surgeon operates on a corpse, because he is so tired and there is "so much blood" that he fails to recognize that his patient died on the table?

Stories like this make great anecdotes, but they do not put into perspective the depth of the crisis in American hospitals. And if people come away from this book with an undifferentiated case of hospital phobia, then "The Great White Lie" will have fallen short of its implied goal—to foster a spirit of active consumerism on the part of hospitalized patients.

The reviewer is the author of the forthcoming "Being Adopted" and is working on a book about the origin of new viruses.

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The Business Letter Format

The general appearance of a business letter is very important. A reader *sees* a letter before he or she reads it. A typed letter makes a better impression than a handwritten one. (If you do not type, ask you instructor for information on how to learn.) In any case, the letter should be neat and should follow a format.

The letter below is an example of a full-block format. Notice how the six essential parts of the letter are arranged on the page.

① 512 West Washington Street
Baltimore, MD 21216
July 1, 199__

② Mr. Martin Nichols
1076 West Washington Street
Baltimore, MD 21216

③ Dear Mr. Nichols:

④ The city of Baltimore is planning to build a parking lot on the corner of Washington and Central streets. As your city commissioner, I am interested in knowing whether residents of your precinct approve of this plan.

If you have any objections to building the parking lot, please notify me in writing within the next two weeks. A special panel will review all residents' letters before a final decision is made.

Remember, your opinion counts.

⑤ Sincerely yours,

⑥ Ray Collins

Ray Collins
City Commissioner

① Heading
② Inside Address
③ Salutation
④ Body
⑤ Complimentary close
⑥ Signature

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More About Letter Parts

Refer to the letter on page 112 as you read the explanation of the letter parts.

① The **heading** consists of the letter writer's address and the date.

② The **inside address** includes the name and address of the person or company receiving the letter. Use the abbreviation *Ms.*, or *Mr.* before the person's name.

③ The **salutation** is the conventional greeting used in letters. Begin the salutation with the word *Dear*, the abbreviation *Ms.*, or *Mr.*, and the person's last name. Put a colon (:) after the name.

④ The **body** consists of the written message organized into paragraphs.

⑤ The **complimentary close** is a polite expression that concludes the letter. Some examples of complimentary closing lines are *Sincerely, Sincerely yours*, and *Truly yours.*

⑥ The **signature** follows the complimentary close. Below your signature, your name should be typed (or neatly printed, if the letter is handwritten).

▼ Practice

A. Write the letter of the correct definition next to the term.

____ **1.** heading
____ **2.** inside address
____ **3.** salutation
____ **4.** body
____ **5.** complimentary close
____ **6.** signature

a. the written message
b. a polite expression that concludes the letter
c. the letter writer's address and the date
d. the handwritten name of the letter writer
e. the word *Dear* followed by the name of the person receiving the letter
f. the name and address of the person receiving the letter

B. Find a business letter you have received at home. Label the six essential parts.

▼ Practice

Most of the business letter parts below contain errors in capitalization, punctuation, spelling, or abbreviation style. Write the corrections on the lines provided. If there is no error, leave the line blank. You may use a dictionary.

1. 432 N. Moss Rd.
New orleans, LA 70119
September 6 199__

2. Mr. Jim Lowell
Lowell's Muffler Shop
6034 north Clark Street
Louisville Ky 40201

3. Dear Mr. Lowell,

4. Truely Yours;

5. 120 w. Fulton avenue
Dallas; TX 75080
november 3, 199__

6. Ms. Carol Andrews
1400 West Bucaro Avenue
Dallas TX 75080

7. Dear Ms. Andrews;

8. congratulations! you
have just won a free
trip to Jamaica.

9. sincerely yours—

WORKING TOGETHER

Directions:-This exercise will give you practice using a business letter format. Choose a partner to work with. Read the contents of the business letter below and arrange the letter parts on the lines that follow. Use the full-block format as shown on page 112.

1. The person letter writer is Juan Cabrera. He lives at 462 North Shady Lane, Evanston, Illinois. The zip code is 60201.
2. Use today's date in the heading.
3. Juan is sending the letter to Yolanda Stone. She works at Bradley Realty, 800 South Ridge Avenue, Evanston, Illinois. The zip code is 60201.
4. This is the body of Juan's letter:

   Paragraph 1: I will not be renewing my lease because I am moving out of town. However, my moving date is June 30, and the lease expires May 31. Would it be possible for me to stay the extra month?

   Paragraph 2: I look forward to your response. Thank you for your help.
5. Juan uses the complimentary close *Sincerely yours.*

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CASAS Objective 6.1.1 - Add whole numbers
CASAS Objective 6.1.2 - Subtract whole numbers
CASAS Objective 6.1.3 - Multiply whole numbers
CASAS Objective 6.1.4 - Divide whole numbers
CASAS Objective 6.1.5 - Perform multiple operations using whole numbers

LESSON 21

Objective: The student will be able to perform addition, subtraction, multiplication, and division operations on a set of numbers.

Duration: One one-hour class

Materials: Two sets of dice

Lesson Development:

To enhance math skills this game is a fun group activity.

1. Toss the four die and write their face values on the board.
2. The objective of the game is to add, subtract, multiply and/or divide the combination of numbers to get as close to 21 as possible.
3. The person who comes closest to 21 gets to toss the dice again.

Developed by: Thomas Bullock
Prince George's Workplace Literacy
(202) 882-3667

CASAS Objective 4.1.6 - Interpret general work-related vocabulary

UNDERSTANDING HEALTH CARE TERMS

Objective:

1. Students will be able to read and interpret general medical vocabulary.
2. Read and locate information listed in alphabetical order.
3. Utilize reference materials and glossary lists in medical texts, manuals, and handouts.

Duration: Ongoing

Materials: Glossary of health care terms
Notebook
Medical dictionary

Lesson Development:

1. Discuss and write on board words that we have heard on the job but do not know the meaning of.
2. Ask the students to keep a record in their notebook of words that they hear, but do not know the meaning of.
3. Bring the list each day to class and use glossary and dictionaries to locate the definitions.
4. Have the students share their words with each other and explain the usage of each word.

Developed by: Thomas Bullock
Prince George's Workplace Literacy
(202) 882-3667

SOVRAN BANK

Site: Classes 1 and 2: Classrooms located in the main office in Takoma Park, MD.
Class 3: Computer room at DuVal High School in Beltsville, MD.

Instructors: Fran Prenata - ESL I
Sue Donegan - ESL II
David Moy - Computers

Time: Volunteer
Class 1 & 2 - June 1, 1991 - August 24, 1991
Saturday
9:00 AM - 12:00 Noon

Class 3 - September 14, 1991 - December 14, 1991
Saturday
9:00 AM - 12:00 Noon

Instructor's Summary:

The Sovran Bank Adult Workplace Literacy class focused on the following work-site educational programs:

- Because of the downsizing and reorganization at Sovran, classroom work includes the following job-seeking skills: locating and answering classified employment ads, filling out job applications, writing cover letters and resumes'. The oral aspect of how to conduct a job interview and practice conversation when asked various job related questions were emphasized.

- An adult tape conversation program consisting of 14 lessons on how to improve verbal conversation and discussion was used. The title of the book and tape series is "Functions of American English".

- A complete reading, writing, and oral program on many aspects of American culture was included. Examples: football, Halloween, baseball, the bald eagle, Mount Rushmore, Coca-Cola, blue jeans, hot dogs, and chewing gum.

- An intense course on vocabulary and spelling programs to increase verbal conversation and writing and spelling improvement also included how to use an American dictionary.

- A brief course and study guide in U.S. citizenship was presented. Students focused on American history and government with an emphasis on verbal conversation.

- Students were given copies of "U.S. News and World Report" to read orally, discuss vocabulary meanings and provide stimulation and discussion on world events.

- A course in computer literacy was provided with an introduction to computer terminology, basic programming, how to use a spread sheet and word processing.

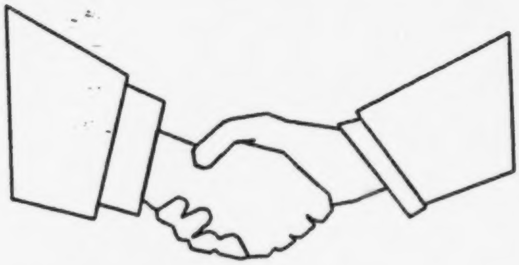
CASAS Objective 4.4.1 - Identify appropriate behavior, attitudes, and social interaction for keeping a job and getting a promotion

SIX KEYS

WORKSHEET ON VIDEO "SIX KEYS TO SERVICE"

KEY	DEFINITION/BEHAVIORS	WAYS TO DEMONSTRATE
• COMPETENCE		
• KNOWLEDGE		
• PRIDE		
• APPEARANCE		
• COURTESY		
• EXTRA EFFORT		

BUSINESS & PERSONAL CONDUCT



"Fiduciary" describes the relationship of trust and confidence between a customer and a financial institution. ('Fiduciary' comes from the Latin word for truth or faith.)

This means that our customers entrust us with their financial assets and every C&S/Sovran employee has a responsibility to protect this relationship.

C&S/Sovran's Code of Conduct contains specific guidelines for employees on how to safeguard this fiduciary relationship.

The Code of Conduct expects that all employees will:

- manage their business and personal affairs so as to avoid situations where public trust and confidence might be compromised or a law violated,
- treat all information about C&S/Sovran customers and their account relationships as confidential, and
- maintain the confidentiality of other C&S/Sovran information, such as: systems, designs, programs, products, and employees.

NOTE: (The entire Code of Conduct can be found in the Personnel Policies and Procedures Manual, Circular Number PER201.)

QUEST WORKSHOP

Keys to Service

Personnel Policies & Procedures Manu

SOVRAN™
FINANCIAL CORPORATION

Circular No. 202

Subject: Personal Appearance

EMPLOYEES RESPONSIBILITIES

Employees are expected to practice good grooming habits, with neatness and cleanliness being of primary concern. Dress should be appropriate for their positions and must conform to the standards established by their managers. A casual or unkempt appearance is unacceptable, as are extremes of apparel, hairstyle, makeup, and accessories.

Although specific standards of dress may vary based on work location, duties, and the amount of public contact to which employees are exposed, the following general guidelines apply to all Sovran employees:

- Clothing must be clean, neat, well-fitting, and business-like. Leisure, recreational, and party-type apparel is inappropriate.
- Extreme or novelty styles of dress, hair, and makeup are to be avoided. Jewelry and other accessories should be chosen with safety in mind and should not be distracting.
- Business-like footwear, suitable for street wear, is appropriate. Tennis shoes, shower shoes, thongs, and other obviously casual shoe styles are unacceptable. Hosiery is recommended.
- See-through or revealing clothing, strapless or backless dresses, tank tops, T-shirts, and shorts are unacceptable.
- Except in restricted work areas and with the specific consent of the department manager, denim jeans and other jean-cut slacks may not be worn.
- Hair, mustaches, and beards must be clean and neatly trimmed.

Failure to conform to established standards of dress and grooming may result in disciplinary action. Any questions regarding the appropriateness of a particular garment or style of dress should be referred to the employee's department/office manager.

CASAS Objective 4.4.1 - Identify appropriate behavior, attitudes, and social interaction for keeping a job and getting a promotion

Business and Personal Conduct

1. What word describes a relationship of trust between a customer and a financial institution?
2. What kind of situations should a Sovran employee avoid?
3. How should Sovran employees treat all customer information?
4. How should Sovran employees treat all C&S/Sovran information?
5. What are examples of customer information that you deal with?
6. What about examples of C&S/Sovran information?

Employee Responsibilities

1. What are "good grooming habits"?
2. What kinds of extremes need to be avoided in work dress appearance?
3. What type of apparel is inappropriate at work?
4. How should jewelry be chosen?
5. What kind of shoes are unacceptable?
6. What is "revealing" clothing? Give two examples.
7. Where can you wear jeans and cut-off jeans?
8. Can you have a beard?
9. Who can you ask if you have question about dress?

CASAS Objective 1.8.2 - Interpret the procedures and forms associated with banking services

BANK TERMINOLOGY

Name ______________________ Date ____________

Match the following terms with their correct definition:

1. Affiliate C
2. Application Systems L
3. Cash Management K
4. Check Routing Number D
5. Clearinghouse M
6. Correspondent Bank B
7. Private Line Secured A
8. Quicksilver J
9. Dual Control G
10. Time Deposit F
11. Encoding Error H
12. Intrabank E
13. Overdraft Banking I
14. Transaction Account V

A. A line of credit tied to a percentage of equity available on a customer's residence.

B. Banks in a particular locality without check cashing facilities.

C. A statewide one- or multi- bank SFC subsidiary.

D. A unique 9-digit code assigned by the ABA to speed check cashing processing.

E. A document used to transfer funds within the same bank.

F. A deposit that cannot be withdrawn before a specified date.

G. A security information protection technique using two people.

H. Incorrect amount placed on the MICR line during processing.

I. A service offered to demand deposit customers providing a line of credit linked to customer's account.

J. Service mark used by Sovran/Central South for its proprietary ATM network.

K. Department responsible for selling and enhancing services that Sovran offers to businesses, such as Lockbox services.

L. Data processing programs designed to perform specific tasks.

M. A check clearing facility for convenience of nearby banks.

N. A deposit account used for checking or third party transfers.

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CASAS Objective 0.1.3 - Identify or use appropriate language in general conversation

BANKER'S WIFE

Banker's Wife's Blues

Where does John live?

He lives near the bank.

Where does he work?

He works at the bank.

When does he work?

He works all day
and he works all night,
at the bank, at the bank,
at the great, big bank.

Where does he study?

He studies at the bank.

Where does he sleep?

He sleeps at the bank.

Why does he spend all day, all night,
all day, all night,
at the bank, at the bank?

Because he loves his bank
more than his wife
and he loves his money
more than his life.

CASAS Objective 0.1.3 - Identify or use appropriate language in general conversation

SOUNDS OF ENGLISH

THE SOUNDS OF ENGLISH

A - Application
B - Bank
C - Cash
D - Debit
E - Encode
F - FED
G - Government
H - Health insurance
I - Info
J - Justice
K - Kranzley
L - Lock box
M - Money
N - NOW
O - Operations
P - PIN
Q - Quickline
R - Reject
S - Savings
T - Time deposit
U - Underpaid
V - VOID
W - Weiland
X - Box
Y - Year-to-date
Z - Zoo

Short Vowels	Long Vowels	Other Vowels
ă - pat	ā - ATM	o͞o - fool, true
ĕ - pet	ē - Eastern Op Code	o͝o - look, put
ĭ - pit	ī - IRA	ow - how, about
ŏ - pot	ō - overdraft	oi - boil, toy
ŭ - putt	Ū - useful	

Digraphs

sh - sheep
th - think
hw - wheel
zh - treasure, measure
ch - cheap
th - this
ŋ - running

CASAS Objective 4.2.2 - Interpret information about employee organizations

FACT SHEET

QUEST WORKSHOP — Overview C&S/Sovran Corporation

C&S/SOVRAN CORPORATION FACT SHEET

C&S/Sovran is a Holding Company, meaning that it has controlling interest in other corporations.

Sovran was formed in 1984 with the merger of First and Merchants Bank and VA National Bank.

C&S was formed in 1906 with the merger of Citizens Bank and Southern Bank.

C&S/Sovran Corporation was formed in 1990 through the merger of Sovran Financial Corp. of Norfolk and Citizens and Southern (C&S) of Atlanta.

C&S/Sovran is the largest merger in the history of the American banking industry.

C&S/Sovran maintains dual headquarters in Atlanta and Norfolk.

- **Total Assets** - $50.3 billion. (Sovran accounts for about $24 billion.)
- **Total Deposits** - $36 billion. (Sovran accounts for about $18.1 billion.)
- **National Ranking** - 13th largest bank holding company in the U.S.
- **C&S/Sovran Branch Market** - VA, MD, KY, TN, SC, GA, FL, and Washington, DC.
- **Total Branches** - over 1000, third largest bank service delivery system in the nation.
- **Stock Listing** - NYSE - CVN

ADDITIONAL INFORMATION

- **Total Employees** - 30,000 (approximately)
- **Total C&S/Sovran COAT Employees** - 5,500 (approximately)
  - Total C&S/Sovran Corporate Operations Employees - 3500 (approximately)
  - Total C&S/Sovran Information Management Employees - 1500 (approximately)
  - Total C&S/Sovran Corporate Communications Employees - 500 (approximately)
- **Sovran Subsidiaries & Affiliates** - Examples include:
  - Sovran Bank, N.A.
  - Sovran/D.C. National
  - Sovran Maryland
  - Sovran Bank Central So.
  - Sovran Credit Corp.
  - Sovran Leasing Corp.
  - Sovran Mortgage Corp.
  - Sovran Insurance Agency, Inc.
  - Sovran Investment
  - Cash Flow, Inc.
  - On Call, Inc.

NOTE: Figures current as of January 1, 1991

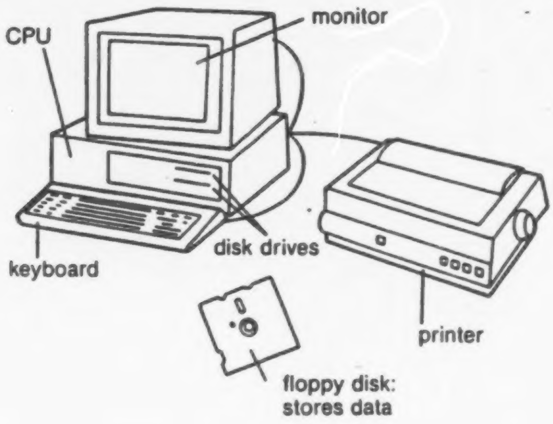
CASAS Objective 4.2.2 - Interpret information about employee organizations

1. What is a holding company?
2. What two banks merged to form C&S/Sovran?
3. What cities are the two headquarters for C&S/Sovran?
4. Name 4 states which have C&S/Sovran banks.
5. What is its listing on the New York Stock Exchange?
6. What is C&S/Sovran's national listing?
7. How many people work for C&S/Sovran?
8. How many people work in COAT?
9. What is COAT?
10. What three divisions make up COAT?

CASAS Objective 4.4.6 - Interpret operating instructions for use of a computer

ON THE JOB

Imagine that you work in a small office. Your office has just bought a personal computer. Your supervisor will teach you how to use it. She has given you this diagram to study. Read it, then answer the questions.



1. What five parts make up the computer system?

___

2. Where is the information that you put into the computer stored?

___

3. What is the function of the monitor (screen)?

___

4. What is the function of the printer?

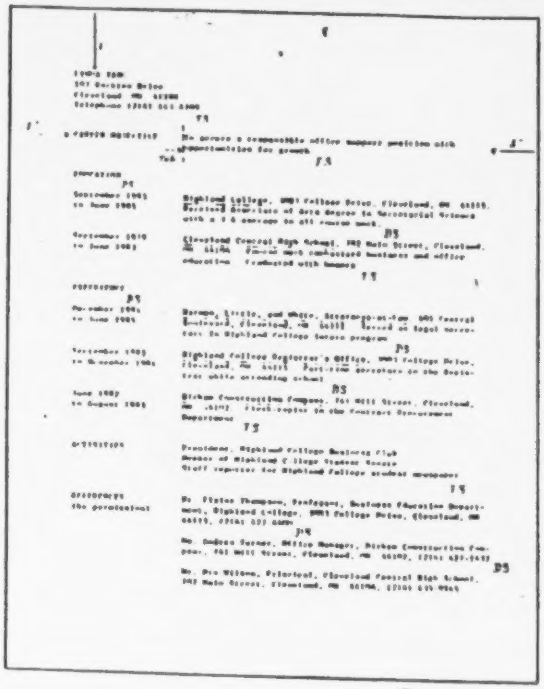
___

5. Is the printer connected to the keyboard or the CPU (Central Processing Unit)?

___

CASAS Objective 4.1.2 - Interpret job applications, resumes, and letters of application

NEED TO KNOW ▶ **Goal: To learn to type a resume** 5'



A resume, which is always included with a letter of application, sets out your background and skills in a 1- or 2-page easy-to-read format.

1. **Margins:** 1" (sides, top, and bottom)
2. **Tab:** 5 spaces after longest heading
3. **Spacing:** SS, TS between sections, DS between items within a section.
4. Head the resume with your name (typed in all caps), address, and telephone number. Center this heading or type it in block format at the left margin.
5. State your career objective.
6. Provide complete educational information. Include school names and addresses, dates you attended, diploma or degree received (or expected), and any courses or special skills that are job related. List the most recent information first.
7. Provide complete work experience. Include dates, the name and location of the business, and your title (or a description of your duties).
8. You may want to include any special interests or hobbies after you list your work experience.
9. List at least three references. Include their names, titles, addresses, and telephone numbers.

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THE COVER LETTER

A cover letter is an introduction to your résumé, JIST Card or application. Address it to the specific person (such as the Director of Personnel) to whom you are applying. Your cover letter should be brief and direct.

Items to include in an application cover letter:

1. Where you obtained the information about the job vacancy (example: newspaper, friend).
2. State the specific job for which you are applying.
3. Give the reason you want the job (interest in field, relocation, etc.,).
4. List the present position or important duties which you can perform.
5. Conclude with a request for an interview and instructions on how you can be contacted.

TIPS FOR LETTER WRITING

1. Follow a formal business letter format (see samples).
2. The letter must be neat with no visible errors, erasures, or corrections.
3. Spelling, punctuation, and grammar must be correct.

CASAS Objective 4.1.2 - Interpret job applications, resumes, and letters of application

SAMPLE LETTER OF APPLICATION

Route #3
Anytown, Yourstate 77702
April 14, 19--

Mr. Thomas E. Lee
Personnel Director
Jones Construction Company
Box 19
Yourtown, Yourstate 77704

Dear Mr. Lee:

Please consider me for the job of electrician's helper that was advertised in The Daily Chronicle on April 10, 19--. I will be graduating from Anytown High School on May 18, 19--, and would like to become an electrician.

The skills I have learned in my high school vocational wiring courses should qualify me for this job. I have had experience in all of the basic skills required in residential wiring, including the safe use of power tools. A more complete description of my qualifications is given in the enclosed résumé.

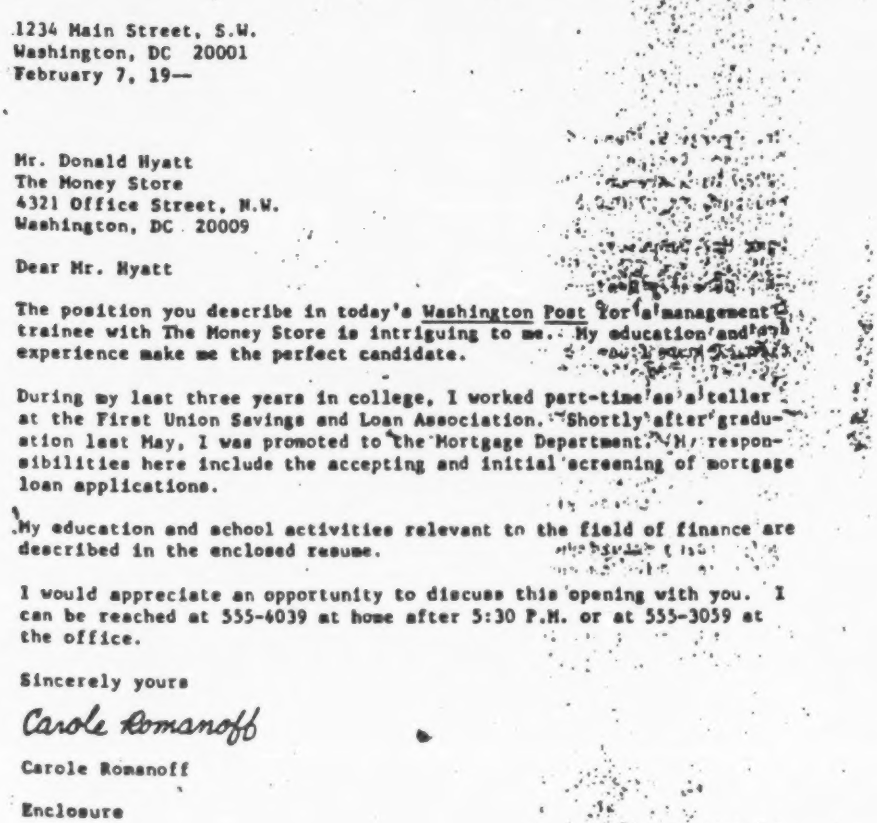
I would appreciate the opportunity to come and talk to you about this job at your convenience. I can be reached by telephone at (405) 555-4433 after 3:30 p.m. or at the address listed above.

Sincerely yours,

Juanita Fernandez

Enclosure

CASAS Objective 4.1.2 - Interpret job applications, resumes, and letters of application



1234 Main Street, S.W.
Washington, DC 20001
February 7, 19--

Mr. Donald Hyatt
The Money Store
4321 Office Street, N.W.
Washington, DC 20009

Dear Mr. Hyatt

The position you describe in today's *Washington Post* for a management trainee with The Money Store is intriguing to me. My education and experience make me the perfect candidate.

During my last three years in college, I worked part-time as a teller at the First Union Savings and Loan Association. Shortly after graduation last May, I was promoted to the Mortgage Department. My responsibilities here include the accepting and initial screening of mortgage loan applications.

My education and school activities relevant to the field of finance are described in the enclosed resume.

I would appreciate an opportunity to discuss this opening with you. I can be reached at 555-4039 at home after 5:30 P.M. or at 555-3059 at the office.

Sincerely yours

Carole Romanoff

Carole Romanoff

Enclosure

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CASAS Objective 4.1.2 - Interpret job applications, resumes, and letters of application

GAIL FRIDLING
7000 Adelphi Road
Hyattsville, MD 20782
(301) 779-5400

CAREER OBJECTIVE

To secure a responsible office support position with opportunities for growth.

EDUCATION

September 1983
to June 1987

Northwestern High School, 7000 Adelphi Road, Hyattsville, MD 20782. Graduation pending, June, 1987. Course work emphasized business and office education. Participated in Cooperative Office Experience work-study program during senior year.

EXPERIENCE

September 1986
to Present

Department of Health and Human Services, 3700 East-West Highway, Hyattsville, MD 20783. Clerk-typist in the Personnel Department.

June 1986
to August 1986

Bob's Big Boy, Prince George's Plaza, East-West Highway, Hyattsville, MD 20783. Waitress.

ACTIVITIES

Photography Club
Methodist Youth Group
Cheerleaders

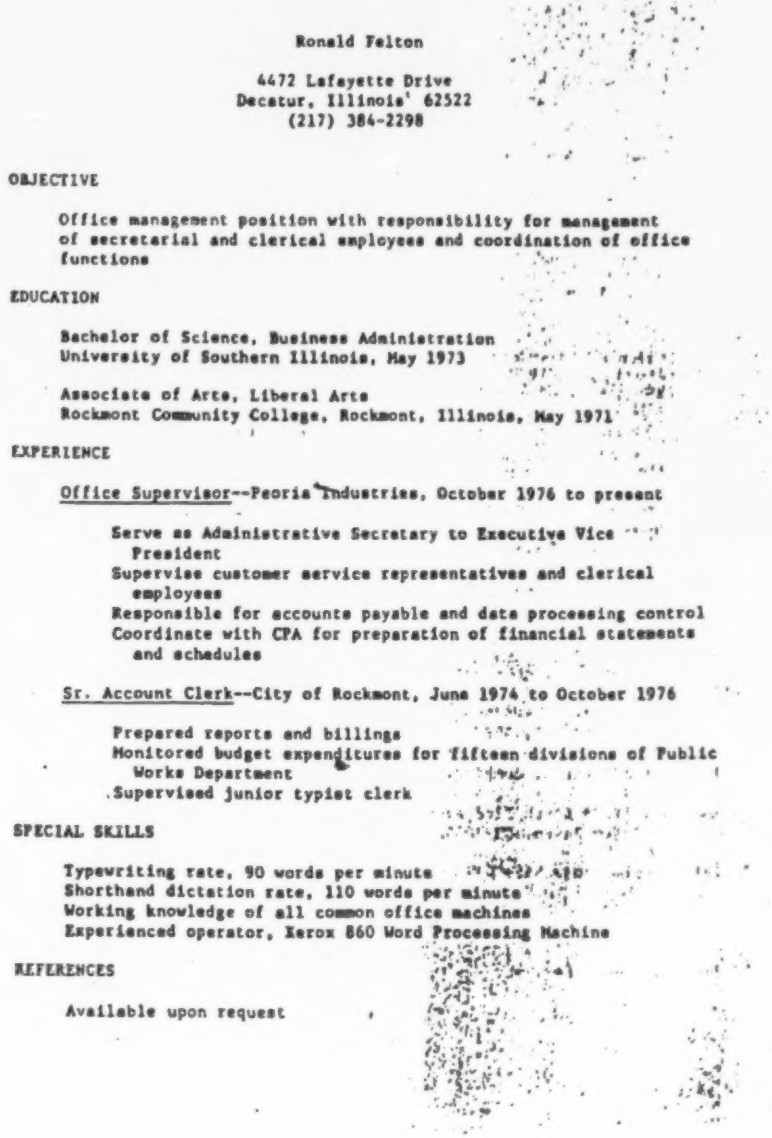
REFERENCES
(by permission)

Mrs. Iris Scott, Teacher, Northwestern High School, 7000 Adelphi Road, Hyattsville, MD 20782, (301) 779-5400.

Ms. Angela Wright, Office Manager, Department of Health and Human Servies, 3700 East-West Highway, Hyattsville, MD 20783, (301) 436-8903.

Mr. Richard Allan, Supervisor, Bob's Big Boy, Prince George's Plaza, East-West Highway, Hyattsville, MD 20783, (301) 446-8644.

CASAS Objective 4.1.2 - Interpret job applications, resumes, and letters of application



Ronald Felton

4472 Lafayette Drive
Decatur, Illinois 62522
(217) 384-2298

OBJECTIVE

Office management position with responsibility for management of secretarial and clerical employees and coordination of office functions

EDUCATION

Bachelor of Science, Business Administration
University of Southern Illinois, May 1973

Associate of Arts, Liberal Arts
Rockmont Community College, Rockmont, Illinois, May 1971

EXPERIENCE

Office Supervisor--Peoria Industries, October 1976 to present

Serve as Administrative Secretary to Executive Vice President
Supervise customer service representatives and clerical employees
Responsible for accounts payable and data processing control
Coordinate with CPA for preparation of financial statements and schedules

Sr. Account Clerk--City of Rockmont, June 1974 to October 1976

Prepared reports and billings
Monitored budget expenditures for fifteen divisions of Public Works Department
Supervised junior typist clerk

SPECIAL SKILLS

Typewriting rate, 90 words per minute
Shorthand dictation rate, 110 words per minute
Working knowledge of all common office machines
Experienced operator, Xerox 860 Word Processing Machine

REFERENCES

Available upon request

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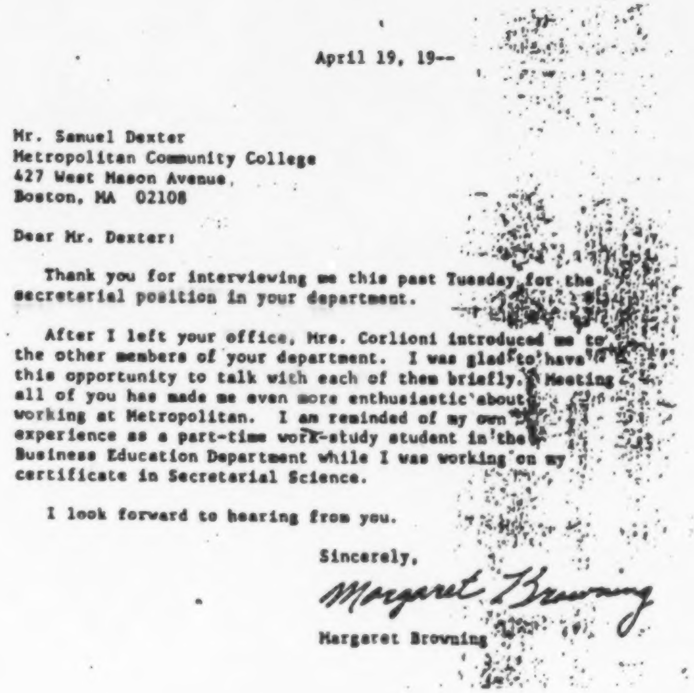
CASAS Objective 4.1.2 - Interpret job applications, resumes, and letters of application



April 19, 19--

Mr. Samuel Dexter
Metropolitan Community College
427 West Mason Avenue,
Boston, MA 02108

Dear Mr. Dexter:

Thank you for interviewing me this past Tuesday for the secretarial position in your department.

After I left your office, Mrs. Corlioni introduced me to the other members of your department. I was glad to have this opportunity to talk with each of them briefly. Meeting all of you has made me even more enthusiastic about working at Metropolitan. I am reminded of my own experience as a part-time work-study student in the Business Education Department while I was working on my certificate in Secretarial Science.

I look forward to hearing from you.

Sincerely,

Margaret Browning

Margaret Browning

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CASAS Objective 4.1.2 - Interpret job applications, resumes, and letters of application

SAMPLE FOLLOW-UP LETTER

Route #3
Anytown, Yourstate 77702
May 7, 19--

Mr. Thomas E. Lee
Personnel Director
Jones Construction Company
Box 19
Yourtown, Yourstate 77704

Dear Mr. Lee:

Thank you for the opportunity to interview for the electrician's helper position.

After talking with you about the position, I am sure that I would like to work for the Jones Construction Company and know that I could do a good job.

Sincerely,

Juanita Fernandez

CASAS Objective 4.1.2 - Interpret job applications, resumes, and letters of application

Questions That May Come Up During The Interview

1. Tell me about your greatest achievement.
2. What are your strengths?
3. What are your weaknesses?
4. What courses in school do you like best? Least? Why?
5. Do you prefer working with others or by yourself?
6. What are your career plans?
7. Where do you hope your career will be in two years? In five years?
8. Why do you want to join our company?
9. Why our company - versus your present employer?
10. Why did you choose this field of work?
11. What especially qualified you for this job?
12. What is an ideal boss for you?
13. Tell me something about your previous employment.
14. Why did you leave your last job?
15. Is it all right to call your previous employer for a reference?

Organizations Included in NationalWorkplace Literacy Program for FY 91

Number of Students	Unduplicated Count
1. American Pest Management 3 ten-week classes	15
2. Cintas Uniform Cleaning 1 ten week class	21
3. Grace Culinary Arts 5 ten-week classes	72
4. Laurel Race Course 9 ten-week classes	98
5. Litton Systems Division -Amecon 1 ten-week class	8
6. Loral Aero System 1 ten-week class	15
7. New Carrollton Public Works 5 ten-week classes	29
8. Prince George's County Public Schools Facilities Department at Brown Station Road 14 ten-week classes	67
9. Prince George's County Hospital Center 1 ten-week class	13
10. Sovran Bank 3 ten-week classes	30
Total	368

SUBMITTED BY JOHN P. CREIGHTON AS OUTSIDE EVALUATOR

PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS' FY91-92 WORKPLACE LITERACY PROGRAM - FIRST EVALUATION REPORT

I, John P. Creighton, am the designated third party outside evaluator for the federal grant funded workplace literacy program conducted by the Prince George's County, MD Public Schools.

This is the first of three reports which will be made to the Office of Adult Education, Prince George's County Public Schools. It covers the period of March 1, 1991 - September 30, 1991. Not included are those workplace literacy programs which are conducted outside of the purview of the grant application approved and funded by the Division of Adult Education & Literacy, U.S. Department of Education.

During this reporting period, a total of 131 employees participated in this program through fourteen classes offered at five work sites. For purposes of this report, those classes which were scheduled for a ten week session and which were extended for a second ten week period, are treated as one class each. In most cases, those employees participating in first term classes continued to attend them during the second ten week term.

Also, two types of classes were conducted - workplace specific basic skills classes and workplace specific ESOL classes.

GRANT PLANNING PERIOD SITE SELECTION ACTIVITY:

While five successful workplace literacy sites were established, several other company sites - initially promising - proved not to be feasible:

o Mash's Hams (a meat packing and processing company) would not allow classes to be conducted during the work day. In order to attend a class, employees would have had to leave the workplace and return after the work day. Prior experience with such an arrangement at other work sites provided a strong precedent that such an arrangement would not work.

o Safeway Distribution Center Supervisors were unsuccessful in their employee recruiting efforts. It is believed that this organization did not make a very strong effort either to notify or to encourage employee participation.

CE 062 794

- Branch Electric Company (a chain of fourteen Maryland retail electric appliance and parts stores). It was impossible to resolve scheduling and location problems given participants from fourteen locations, all with differing schedules and differing travel distances.

- Beretta USA (a firearms manufacturer) wanted a math program to begin prior to the School Systems' receiving its grant award notification. This company hired its own math teacher.

Five workplace sites were established and thirteen classes were conducted at these sites. These sites and classes are the subject of this report.

PROCEDURES:

I visited and observed many of the classes when they were in session, informally interviewed teachers and students, and examined curricular materials in use.

I developed an "Employer Evaluation" questionnaire instrument which contained thirteen open-ended questions. During August and September, I visited all employers involved in the program and conducted face-to-face interviews with them using this instrument. The respondents interviewed represented personnel most intimately involved with the program and most likely to be knowledgeable about its relative success and effectiveness.

"Employee Evaluation" forms, which had been used in previous years, were again used. These forms were distributed by the teachers, collected and submitted. The anonymity of the respondents was preserved.

I collected a total of ninety-five employee evaluation forms. Responses are aggregated by site and, where known, by class. All answers to the two open-ended questions are listed in this report.

FINDINGS AND RECOMMENDATIONS:

For the Prince George's County Public Schools' Facilities Department (five ABE classes).

Three workplace basic skills classes were conducted for two ten week sessions and two for one ten week term. A total of 156 classes were held.

Enrollment for the five classes was 56 with an average of eleven students per class.

Worker attendance (computed as a percent of time actually enrolled) was very good particularly considering both busy summer maintenance schedules and summer vacations. (Participants received one-third paid release time.) Per class average attendance ranged from 95% to 73% with a "mean of the mean" of better than 83%.

Responses from the Facilities Department's Director of Operations were extraordinarily positive. He did express regret that GED preparation is not an allowable program since he indicated that a high school diploma would be of great benefit to his employees.

The following is an analysis of the responses of twenty seven evaluations received from participating employees. Numbers in parentheses indicate the "N":

- Length of employment: Range from thirty-four years to one year with a mean of 15.1 years of service.
- Three primary reasons for enrollment:
  - To Better Myself (21)
  - To Learn to Work With Numbers (12)
  - To Help My Children With School Work (8)
- 89% described the class as "Very Helpful" and the rest as "Of Some Help".
- Three primary listings of perceived skill improvement:
  - Arithmetic (17)
  - Writing (14)
  - "Self-discipline" (9)
- There was a mixed response to the question of the helpfulness of the instructional material with the mean falling at the high end of the "Somewhat Difficult to Learn" category.
- 96.3% found the program "Definitely Interesting".
- 78% were certain that what they learned would improve their job performance and another 18.5% believed it probably would.
- 55.5% were sure that the instruction was geared to an appropriate level while another third believed that it probably was.

- Nine out of ten were sure that what they had learned was useful outside of class and the rest thought it probably would be.

- Expectations of what classes would be like elicited the full range of responses with 56% percent agreeing that the classes were what they had expected while another 26% thought that they probably were.

- All participants indicated that they would recommend the class to co-workers who need it.

Indications of what they had learned included math (15) (Math was of great interest to this group); reading (4); English (5); writing and spelling (10); and doing one's job better (1).

Twenty-eight percent would not change anything about the program. For the rest there was a strong interest in increasing the number of class hours available for instruction as well as some concern with perceived difficulties in scheduling classes during the summer months.

Participant responses to the "helpfulness of the instructional materials" question, indicates that this issue should be explored further. I am unsure what these responses mean. While it could be that participants wish to interact with instructional materials which are perceived to be somewhat difficult to learn, it appears to be more likely that they are suggesting the use of less difficult materials. An exploration with the students should clear up this issue and suggest whether or not to revise the materials in use.

Other than that, my observations and data collection findings do not indicate that any changes be recommended at this site. On the contrary, it appears to me that this site could serve as an exemplary model of workplace literacy in action.

For Laurel Race Course (three classes).

Three ten week classes were conducted in the stables area for the race course grooms and hot walkers. Two were workplace related ESOL classes and the other a basic skills class. A total of 58 class sessions were held.

Enrollment for the three classes was 57 with an average enrollment of nineteen.

Worker attendance was very good, particularly given the relatively high risk population. Teachers made extraordinary efforts to "round up" the participants. They are to be commended for knocking on room doors and visiting the recreation areas to insist that participants attend class. Per class average attendance ranged from 86% to 69% with a "mean of the mean" of 77%.

Responses from the stable workers' Recreation Director was extremely positive. He took some pains to explain that, initially, this population was generally lacking in a sense of responsibility and a motivation to attend classes. His responses are enlightening.

An analysis of the thirteen employee evaluation forms reveals the following:

o Length of employment ranged from eight years to one month with a mean of two years of service.

o Primary reasons for enrollment:

  - To Better Myself (9)
  - To Learn English (8)
  - To Get a Better Job (4)
  - To Learn to Read (4)

o 86% believed the program to be very helpful while the rest saw it as of some help.

o Primary listings of skill improvement:

  - Reading (9)
  - Speaking English (8)
  - Writing (8)

o One found the instructional material somewhat difficult to learn while the rest described it as easy or somewhat easy to learn.

- 93% found the program interesting and one listed it as probably not interesting.
- One didn't know if the class would improve his job performance. The rest believed that it would.
- Three fourths were certain that the class was taught at an appropriate level and the remainder thought that it probably was.
- 86% were sure that what they had learned was useful outside of class while the rest thought that it probably was.
- One answered that the class was definitely not what had been expected but all the rest replied that it was.
- All agreed that they would definitely recommend the class to co-workers who needed it.

Indications of what they had learned included math (4); reading (1); speaking and/or writing English (1); and the ability to say "thank you" (1).

Other than a request for an auto repair course, no suggestions were made for program changes.

The instructors at this site are commended for having developed an excellent very occupational specific workplace literacy curriculum. They researched this field and developed their own instructional materials. They provided for transfer of learning by going with their students to the stables and utilizing the learnings developed in class.

I commend the Maryland Thoroughbred Horsemen's Association for providing materials for students to use in class and for providing tickets good for a hot dog and a soda as a reward to students for class attendance.

The race course stable area represents a large target population in need of literacy services. A significant group are foreign-born who are non-English speaking or speak very little English. I recommend, therefore, that this site be retained and that classes continue to be offered.

For New Carrollton Dept. of Public Works (three classes).

Two twenty week workplace-related basic skills classes and one ten week basic skills class were conducted for the city's public works employees. A total of one hundred class sessions were held.

Enrollment for the three classes was 37 with an average enrollment of 12.3.

Attendance was outstanding with a per class average range from 91% to 86% and a "mean of the mean" of 88.3%.

Responses from Director of Public Works were extremely positive. He indicated a strong wish to extend the program for an additional twenty weeks.

Twenty-four Learner Survey Responses were submitted which revealed the following:

- o Length of employment ranged from twenty years to one month with a mean of 9.4 years of service.
- o Primary reasons for enrollment:
  - To Better Myself (17)
  - To Learn to Work With Numbers (6)
  - To Help Children With School Work (6)
- o One did not know if the class had been helpful. All the rest found it extremely helpful or of some help.
- o Primary listings of skill improvement:
  - Performing Arithmetic (15)
  - Reading (13)
  - Speaking (7)
  - Self-discipline (7)
- o One found the instructional materials somewhat difficult to learn but all the rest said that it was easy to learn or somewhat easy to learn.
- o One answered that the program was probably not interesting but all the others said that it definitely or probably was.

- Results were mixed on the learners' perception concerning the skills they had learned and their relationship to improved job performance: 38% believed they definitely would help job performance and another third thought that they probably would. 17% believed that they would not help and 8% did not know if they would help or not.

- Similarly, one-half definitely agreed that the program was taught at an appropriate level and another 29% thought that it probably was. Four others, however, said that it probably was not.

- Only one respondent believed that the skills learned were not useful outside of class. The others agreed that they definitely or probably were useful.

- While 92% noted that the classes were definitely or probably what they had expected, two said they they definitely were not.

- 87.5% would definitely recommend the class to a co-worker who needed it and 8% probably would. One probably would not.

Indications of what the workers had learned included: math (16); reading (5); English & writing (4); and thinking and problem-solving (2).

Fifty percent had no suggested changes. There were four suggestions related to amount of class time or class time schedules.

The mixed responses to many of these questions suggests that, while most workers were well satisfied with the classes, a few were not. If these classes are continued with some of the same workers, it would be worthwhile to poll them periodically to determine how well their needs are being met.

It appears that there is strong departmental support for this program and that, given the flexibility to do so, one or more classes could continue to be conducted.

For the Litton Systems, Amecom ESOL Class.

One workplace related ESOL class was conducted for a twenty week session.

Enrollment was eight students.

Attendance averaged 87%.

Responses from the Director of Employee Relations were totally positive.

An analysis of the eight employee responses received is as follows:

- o Length of employment: Range from eighteen years to five years with a mean of 8.6 years of service.
- o Primary reasons for enrollment:
  - To Learn to Write (4)
  - To Learn to Read (3)
  - To Learn English (3)
  - To Better Myself (3)
- o Five found the class extremely helpful and the other three saw it as of some help.
- o Perceived skill improvement included:
  - Writing (7)
  - Reading English (6)
  - Speaking (4)
- o Five found the class extremely helpful while the other three saw it as of some help.
- o Two-thirds felt the instructional material was easy to learn.
- o All who responded found the program definitely interesting.
- o Seven were sure that the class would improve their job performance and the remaining one thought it probably would.

- Seven were sure or probably sure that the instruction was at an appropriate level and one thought that it probably was not.

- Two-thirds were certain that what they had learned would be useful outside of class and the remainder believed that it probably would be.

- Two-thirds agreed that the class was what they had expected and the others said that it probably was.

- All respondents would recommend this class to a co-worker who needed it.

Indications of what they had learned included reading (4); writing (3); and job related skills (5).

Two participants recommended changes to the time allowed for class and one complimented his/her teacher.

In addition to observations made and data collection findings, seven written student testimonials are attached. No program changes are indicated from these data. It is unfortunate that company fiscal constraints and worker schedules do not allow for a continuation of this class. Both the Director of Employee Relations and the participating workers wish it were not so.

Sovran Bank (two classes)

Two ten week workplace related ESOL classes were conducted on site on Saturday mornings during non-working hours. A total of 25 class sessions were held.

Enrollment for the two classes was 23 with an average enrollment of 11.5.

Attendance was a per class average of 78% and 85% with a "mean of the mean" of 81.5%. These attendance figures are excellent given the fact that participants returned to the work site on Saturdays which were non-working days. They were not provided with release time.

Responses from the Operations Officer were generally positive. However, she expressed serious concern about a large drop-out rate in one class. She was equally concerned that the program had not made an effort to determine the reason for the increasing attrition. She investigated this issue on her own and believes that the teacher was not adequately meeting the needs of this high level ESOL group.

Nine Learner Survey Responses were submitted. They revealed the following:

o Length of employment ranged from three years to 18 months with a mean of 2.2 years of service.

o Primary reasons for enrollment:

  - To Better Myself (7)
  - To Learn English (5)
  - To Get a Better Job (3)

o 80% found the class to be extremely helpful while the other 20% found it of some help.

o Primary listings of skill improvement:

  - Speaking English (9)
  - Writing English (6)
  - Reading English (5)

o One found the instructional materials somewhat difficult to learn while the rest found them to be easy or somewhat easy to learn.

o All listed the program as definitely interesting.

- o 78% were sure that what they had learned would definitely improve their job performance and the rest believed that it probably would.
- o Two-thirds were certain that the program had been taught at the appropriate level and the remaining one-third believed that it probably had been.
- o 89% were sure that the skills they had learned would be useful outside of class and the remaining one thought that it probably would be.
- o 78% said that the class was definitely what they had expected and the other two believed that it probably was.
- o All respondents would definitely recommend the class to a co-worker who needed it.

Indications of what the workers had learned included speaking English (7); vocabulary (3); and generally improved ability to communicate in English.

Four had no suggested program changes. The other four responses had to do with computer access, increased hours for class, home assignments and increased class time devoted to students speaking to one another.

The only major problem related to this entire report stems from the perceptions of the employer at this site about one of the two classes. Given this situation, I recommend the following for all sites:

1. Require that all instructors visit and tour the work site prior to the beginning of the first class. While the majority of instructors did visit and tour the worksites, at least one did not do so.
2. Teachers should become acquainted with the work site supervisor responsible for the class and should informally report to that person on a regular basis such things as class activities, attendance information, student progress and areas of potential concern. Again, in most cases this procedure was followed. In a few cases, it was not.

DIRECT QUOTES FROM WORKPLACE LITERACY EMPLOYER INTERVIEWS

From the New Carrollton Dept. of Public Works Director:

"Their morale is high. Three of them will go to junior college. One was able to keep up with diesel school because he knew his fractions.

"This program clearly is preparing the younger guys for supervisory rolls.

"I'd rate the instructional program as excellent. I think it's outstanding... All my best employees have stayed with it. There has been a great effort made.

"The difference in supervisors will be an increase in education level by 40%. Some, who today are semi-literate, will be able to handle administrative tasks.

"I have recommended this program to many other employers."

From the Laurel Race Course Recreation Director:

"They have gained self-esteem. They will talk now. They reach out and participate now.

"The trainers don't have to take them by the hand nearly as much.

"The teachers went out and got the things that the workers need in the workplace. The teachers use things that are used on the job. Everything is related to the job environment which is outstanding.

"The program is great!"

From the Operations Officer at SOVRAN Bank:

"The employees I've talked to really like the program and value it.

"I worked a long time to get these classes and I'm really pleased.

"It allows us to tap more of their potential. It gives our employees more flexibility.

"The P.G. Schools has the most experience of providing a program of anyone. They are committed to doing a good job. There is a cooperative attitude."

From the Facilities Department Director of Operations, P.G. Public Schools:

"They are more interested in the technical aspects of their jobs than they were previously. They are more willing to be involved in things that require reading and interpretation.

"Now, they want to be more involved. Before, they were in the background. We've given them confidence.

"I've had several employees call me and say that it's the best we've ever embarked on as a department.

"It instills confidence in all of our employees in our management and administration.

"I think we have absolute excellence."

From Litton Systems Amecom Division Director of Employee Relations:

"Their conversational skills are much improved. They have more confidence and are more enthusiastic. I'm impressed.

"One in accounting couldn't be put on the phone. Now she can be.

"The employees loved it. They couldn't have been happier.

"I think it's excellent. Everybody wins. The Company gains positive relations. We gain a more efficient and capable work force.

"The way it was set up was painless for the Company."

PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS WORKPLACE LITERACY SPRING/SUMMER, 1991 EMPLOYER EVALUATION SURVEY RESPONSES

RESPONDENT: Robert Kuntz Director of Operations, Facilities Dept.

ORGANIZATION: Prince George's County Public Schools

DATE OF INTERVIEW: September 16, 1991

1. Regarding participating employees, job performance changes noticed or not.

"The response from their supervisors is that they are more interested in the technical aspects of their jobs than they were previously. That's due to their better comprehension of reading and better math skills."

2. Changes in employee job attitudes noticed or not.

"Yes. That ties in to the first question. The supervisors have seen it"

3. Indications of employee basic skills improvement seen or not.

"Yes. I have had many conversations with their supervisors. They (the employees) are more willing to be involved in things that require reading and interpretation."

4. (If #3 was "Did see indications of improvement) Improvement resulted in improved job performance or not.

"It goes hand-in-hand. Given the type of work they do, many of the people were of the lower level in reading and math. Now, they want to be involved more. Before they were in the background. We've given them some confidence."

5. Improved ability to communicate on job and solve job-related problems noticed or not.

"I can't answer that. I've had conversations with them. They are happier and more involved. Based on the premise that a happy employee is a productive employee, I'd say, yes."

6. Number selected regarding instructional program effectiveness - On a scale of 5 to 1 where 5 = excellent and 1 = poor.

"I'd give Betty Sonneveldt a five. She has the ability to develop trust with her students as well as enthusiasm."

7. Opinion about how well employees like the program.

"Very much. I've had several employees call me and say that it's the very best program we've ever embarked on as a department."

8. Problems with class scheduling, if any.

"No. There were some requirements on our part, but it has not created any adverse problems."

9. Degree of organizational commitment and support.

"Very committed. My meetings with the administration have resulted in their support to proceed and to modify any work schedules or programs, guaranteeing their support for this undertaking."

10. Overall reaction to work-site classes.

"I think it's terrific! Particularly literacy in the workplace classes. It says that management understands and is willing to do something about it. Particularly when you're in the education business. I've been here 27 years and this is the first time that we've done something like this."

11. Overall benefits to organization, if any.

"It results in a better finished product in respect to our building maintenance. It instills confidence in all of our employees in the management and administration. It motivates employees, especially those who were less motivated before."

12. Likelihood of recommending program to another employer with similar needs.

"Very likely. Directly because of the results. I've personally seen results from this class as well as what I've heard from the employees who have only the highest regard for the class."

13. Suggestions for program improvement.

"I think we attained absolute excellence. All they had to do was come to class. Everything was done for them already - the teacher, the materials, everything. There is one thing. The grant doesn't allow the GED as part of this. Make the GED an ultimate part of literacy in the workplace."

EMPLOYEE EVALUATION INFORMATION

CLASS LOCATION: BOARD OF EDUCATION MAINTENANCE YARD, BROWN STATION ROAD - FIVE CLASSES

TEACHER: Betty Sonneveldt (All Classes)

CLASS 1.

NUMBER OF CLASS SESSIONS: Thirty-nine, (two terms) twice weekly from April 29 - September 18, 1991.

CLASS SIZE AND TYPE: Eight; Workplace-related basic skills.

CLASSES ATTENDED: Range from 37 of 39 sessions to 4 of 6 sessions. Average attendance as a function of actual class sessions enrolled: 81%.

STUDENT ASSESSMENT: CASAS/ECS Placement and Survey Achievement Tests were administered and "Workplace Literacy Analysis Individual Profile" completed for all students.

CLASS 2.

NUMBER OF CLASS SESSIONS: Thirty-five, (two terms) twice weekly from April 29 - September 4, 1991.

CLASS SIZE AND TYPE: Nine; Basic skills.

CLASSES ATTENDED: Range from 32 of 35 sessions to 2 of 2 sessions. Average attendance as a function of actual class sessions enrolled: 82%

CLASS 3.

NUMBER OF CLASS SESSIONS: Twenty-one, twice weekly from April 30 - July 8, 1991.

CLASS SIZE AND TYPE: Seven; Basic skills.

CLASSES ATTENDED: Range from 17 of 21 sessions to 5 of 5 sessions. Average attendance as a function of actual class sessions enrolled: 73%

CLASS 4.

NUMBER OF CLASS SESSIONS: Nineteen, twice weekly from July 11 - September 24, 1991.

CLASS SIZE AND TYPE: 7; Basic skills.

CLASSES ATTENDED: Range from 19 of 19 sessions to 2 of 2 sessions. Average attendance as a function of actual class sessions enrolled: 95%

CLASS 5.

NUMBER OF CLASS SESSIONS: Forty-two, (two terms) twice weekly from April 30 - September 17, 1991.

CLASS SIZE AND TYPE: 25; Basic skills.

CLASSES ATTENDED: Range from 42 of 42 sessions to 5 of 8 sessions. Average attendance as a function of actual class sessions enrolled: 85%

RELEASE TIME? YES (ONE-THIRD TIME)

NUMBER OF LEARNER SURVEY RESPONSES: Twenty-seven.

LENGTH OF PRESENT EMPLOYMENT: Thirty-four years (1); Thirty-three years (1); Thirty-one years (1); Twenty-seven years (2); Twenty-four years (1); Twenty-two years (2): Eighteen years (2); Seventeen years (2): Sixteen years (2); Fifteen years (3); Eleven years (1); Ten years (1); Six years (1); Five years (1); Two years (3); One year (3).

(In some cases, the following questions elicited more than one response:)

1. How Learned About Class: From a Meeting at work (12); From Supervisor (14); From a Bulletin (8).
2. Why Enrolled: To Better Myself (21); To Get a Better Job (2); To Learn to Read (2); To Learn English (2); To Get a GED (2); To Learn to Write (6); To Learn to Work With Numbers (12); To Be Able to Help My Children With School Work (8); "have a real BA in literature but didn't have to take math-science req. College athlete (test scores were ignored by UM never got passed Algebra I in High School (D+)." (1); "I wanted to brush up on my math." (1); "Better my spelling." (2); "To prepare for college writing." (1).

3. Helpfulness of Class: Extremely Helpful (24); Of Some Help (3).

4. Skills Class Helped to Improve: Reading (8); Speaking (7); Writing (14); Performing Arithmetic (17); Self-discipline (9); Self-motivation (8); Spelling (2).

5. Helpfulness of Instructional Material: Easy to Learn (8); Somewhat Easy to Learn (7); Somewhat Difficult to Learn (13); Very Difficult to Learn (1).

6. Degree to Which Found Program Interesting: Definitely Yes (26); Probably Yes (1).

7. Degree to Which Skills Learned Will Improve Job Performance: Definitely Yes (21); Probably Yes (5); Probably Not (1).

8. Degree to Which Program Was Taught at Appropriate Level: Definitely Yes (15); Probably Yes (9); Probably Not (1); I Don't Know (2).

9. Degree to Which Skills Learned Are Useful Outside of Class: Definitely Yes (24); Probably Yes (3).

10. Degree to Which Class Was What Expected: Definitely Yes (15); Probably Yes (7); Probably Not (4): Definitely Not (1).

11. Would Recommend Class to a Co-worker Who Needs It: Definitely Yes (27).

(The following two questions were open-ended in nature. Answers are reproduced as written:)

12. What Learner Can Do That Could Not Do Before:

    "Read, Write, Spell."

    "My math and English are better."

    "Write letters better and understandy verbs and subjects better."

    "I have a much better understanding of Math and Reading."

    "I am more educate with Math and also brushing up on Fraction is very good."

"Fractions." (2)

"Multiply and divide fractions. Forced (by need) to perform problems to get real answers rather than just guessing."

"subtract fractions."

"Nothing."

"I feel I can do Ratio & Proportion Better as well as Percents."

"I can figure percentages and fractions easier."

"Deal with number better and faster."

"I can do my Job Better. I Also have got much Better in Math."

"I can read better than I could. I can also do more Math, Spell better."

"Great improvement in talking, writing, math, english. I can do plumbing jobs, in less time than before."

"I can do math better and spell better."

"This class is making my spelling, reading and writing better."

"I have learn more in language & Math than what knew before."

"I can write more efficiently.

"Do more work at home, but this don't alway work out."

"Find percents, add, subtract, multiply, divide, Fractions, decimals, pick out pronouns, adjectives, past participles, verbs, adverbs, write, essays, punctuation."

13. What Learner Would Change About the Program:

"Nothing" (4)

"to start class in the morning especially in hot summer." (2)

"I would change the hours and sometimes with Two instructors."

"More Time." (3)

"The program is perfect for persons need to learn at this level."

"Make the classes last longer in semester."

"Some of the hard things Stay a little longer (and Keep the same teacher."

"I'm so thankful, I would not change anything."

"The time. Summers are busy and many people take vacations."

"Have a longer class."

"I would arrange for the class to be taught in the fall of the year. During summer we have to many jobs to do. This causes us to miss some classes."

"Go a little slower."

PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS WORKPLACE LITERACY SPRING/SUMMER, 1991 EMPLOYER EVALUATION SURVEY RESPONSES

RESPONDENT: Robert T. Griffith, Recreation Director

ORGANIZATION: Laurel Race Course

DATE OF INTERVIEW: August 7, 1991

1. Regarding participating employees, job performance changes noticed or not.

"Yes. They started to dress up for the classes and to. practice better hygiene. (*) Teaching them English related to their job.. It's easier for the trainers who employ them. They now can understand them a lot better. It's improving this relationship."

2. Changes in employee job attitudes noticed or not.

"Yes. Coming to class - it reflects their lifestyle. They have gained self-esteem. They will talk now. In the past they wouldn't mingle or get off the racetrack. Now they go to the movies. They have more confidence."

3. Indications of employee basic skills improvement seen or not.

"Yes. I haven't witnessed that but knowing more English shows that they have improved."

4. (If #3 was "Did see indications of improvement) Improvement resulted in improved job performance or not.

"Better. It relieves the trainers more. They don't have to take them by the hand as much."

5. Improved ability to communicate on job and solve job-related problems noticed or not.

"Yes. They are doing things that they haven't done in the past. They want to play a North American/South American soccer game. They wouldn't have done that before. They reach out and participate now."

6. Number selected regarding instructional program effectiveness - On a scale of 5 to 1 where 5 = excellent and 1 = poor.

"Five. For one thing, the teachers went out in the areas they work in and got the things they need in the work place. They (the teachers) use things that they use on the job. It's work-related knowledge. It's very beneficial. I requested medical, dental, and pension plans. The teachers had people brought in to explain them. Everything is related to the job environment which is outstanding"

7. Opinion about how well employees like the program.

"Very much. Because they come back and because of the changes in their appearance. The teachers' abilities are right. They enjoy the teachers."

8. Problems with class scheduling, if any.

"No. They are offered at the best time available. These times conflict the least. Conflict is minimal."

9. Degree of organizational commitment and support.

(N.B. The organization is the Maryland Thoroughbred Horsemen's Association.)

"Very committed. They have provided lots of supplies. Also they provide a ticket for each student that gets them a free hot dog and coke after class. They're doing it every day, like providing forms they need."

10. Overall reaction to work-site classes.

"It's a great thing. A lot of these people need it. A lot of them came from dysfunctional homes. They have some structure now. The classes help them to take some responsibility for their lives. Here, they have no bills. They have a sheltered life. It's harder to get them to take that first step. Some won't take the responsibility. I wish there was a larger attendance. There are a lot of people who could use it.

11. Overall benefits to organization, if any.

"Improving the work force. (*) You're upgrading the level of the workers. They will be better educated and more intelligent."

12. Likelihood of recommending program to another employer with similar needs.

"Very likely. You're improving your work force. It's easier to tell someone about it. It teaches the employees to assume some responsibilities."

13. Suggestions for program improvement.

"The program is great. All that's lacking is getting more of them to come to it. Getting them to take that first step and want to come to it. You might have a better response at other places."

EMPLOYEE EVALUATION INFORMATION

CLASS LOCATION: LAUREL RACE COURSE - THREE CLASSES

TEACHER: Belinda Elmer (Two workplace related ESOL classes)

FOR CLASS 1:

NUMBER OF CLASS SESSIONS: Nineteen afternoon classes, twice weekly, from May 13 - August 7, 1991.

CLASS SIZE, TYPE AND NUMBER OF SURVEY RESPONSES: 24; Beginning level workplace specific ESL; N=0

CLASSES ATTENDED: Range: From 15 of 19 sessions to 1 of 1 session. Attendance as a function of actual class sessions enrolled: 76%.

FOR CLASS 2:

NUMBER OF CLASS SESSIONS: Nineteen late afternoon classes, twice weekly, from May 13 - August 7, 1991.

CLASS SIZE, TYPE AND NUMBER OF SURVEY RESPONSES: Twenty; Intermediate level workplace specific ESL; N=0

CLASSES ATTENDED: Range: From 11 of 19 sessions to 1 of 1 session. Attendance as a function of actual class sessions enrolled: 69%.

RELEASE TIME? No.

STUDENT ASSESSMENT: The CASAS/ESL Test was administered and the "Workplace Literacy Analysis Individual Profile" was completed for selected students.

LEARNER SURVEY RESPONSES: No survey response forms were submitted.

TEACHER: Mary Ellen Butlak

NUMBER OF CLASS SESSIONS: Twenty afternoon sessions from May 15 - August 7, 1991.

CLASS SIZE, TYPE AND NUMBER OF SURVEY RESPONSES: Thirteen; Workplace specific Basic Skills; N=13

CLASSES ATTENDED: Range: From 20 of 20 sessions to 1 of 1 session. Attendance as a function of actual class sessions enrolled: 86%.

RELEASE TIME? No.

STUDENT ASSESSMENT: MAPP/CASAS Placement Tests and Survey Achievement Tests were administered to all students.

LEARNER SURVEY RESPONSES:

LENGTH OF PRESENT EMPLOYMENT: Eight years (1); Five years (1); Three years (1); Two years (2); Eighteen months (1); One year (1); Seven months (1); Four months (1); Two months (1); One month (2).

(In some cases, the following questions elicited more than one response:)

1. How Learned About Class: From a Friend at Work (8); From a meeting at work (2); From Supervisor (1); From a Bulletin (3).

2. Why Enrolled: To Better Myself (9); To Get a Better Job (4); To Learn to Read (4); To Learn English (8); To Get a GED (2); To Learn to Write (1); To Learn to Work With Numbers (2); To Keep My Mind Busy (1); To be Able to Learn Auto Repair (1).

3. Helpfulness of Class: Extremely Helpful (12); Of Some Help (2).

4. Skills Class Helped to Improve: Reading (9); Speaking (8); Writing (8); Performing Arithmetic (4); Self-discipline (3); Self-motivation (5).

5. Helpfulness of Instructional Material: Easy to Learn (12); Somewhat Easy to Learn (4); Somewhat Difficult to Learn (1).

6. Degree to Which Found Program Interesting: Definitely Yes (12); Probably Yes (2); Probably Not (1).

7. Degree to Which Skills Learned Will Improve Job Performance: Definitely Yes (10); Probably Yes (5); Don't Know (1).

8. Degree to Which Program Was Taught at Appropriate Level: Definitely Yes (12); Probably Yes (4).

9. Degree to Which Skills Learned Are Useful Outside of Class: Definitely Yes (12); Probably Yes (2).

10. Degree to Which Class Was What Expected: Definitely Yes (10); Probably Yes (2); Definitely Not (1).

11. Would Recommend Class to a Co-worker Who Needs It: Definitely Yes (13)

(The following two questions were open-ended in nature. Answers are reproduced as written:)

12. What Learner Can Do That Could Not Do Before:

"Math that I didn't learn and forgot."

"I can solve math problems better. Speak and write better English. Read graphs."

"Tighting up my knowledge of skill better and having the strengh to take my GED."

"Multiply fractions. Divide fractions. Percents."

"read better & Faster. time tables"

"Now I can say thank you. I couldn't even do that when I first came to class."

13. What Learner Would Change About the Program:

"Auto Repair."

"Nothing." (3)

PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS WORKPLACE LITERACY
SPRING/SUMMER, 1991 EMPLOYER EVALUATION SURVEY RESPONSES

RESPONDENT: Richard Robbins, Director of Public Works

ORGANIZATION: New Carrollton Dept. of Public Works

DATE OF INTERVIEW: August 6, 1991

1. Regarding participating employees, job performance changes noticed or not.

"Yes and no. Sixty to seventy percent of them are involved in the classes. The bulk of their work is physical work. It's the first time anyone has given the employees anything. Their morale is high. Three of them will go to junior college. One was able to keep up with diesel school because he knew his fractions."

2. Changes in employee job attitudes noticed or not.

"It's hard to say. A whole lot of things have happened over the past two years. Morale is good right now and education is part of it along with other things."

3. Indications of employee basic skills improvement seen or not.

"Realize the types of jobs they have. I'm constantly sending people to various schools. They do better because their minds are stimulated."

4. (If #3 was "Did see indications of improvement) Improvement resulted in improved job performance or not.

"I have a spectrum of skill levels. This program clearly is preparing the younger guys for supervisory rolls. I've had one-third of my men become computer literate."

5. Improved ability to communicate on job and solve job-related problems noticed or not.

"I can't say I have. We have good communication skills among us."

6. Number selected regarding instructional program effectiveness - On a scale of 5 to 1 where 5 = excellent and 1 = poor.

"I'd rate it a 5. I think it's outstanding. They (the instructors) clearly work to stimulate the employees. They look for work-related stuff to use. The instructors are pleased with what they see. All my best employees have stayed with it. There has been a great effort made."

7. Opinion about how well employees like the program.

"They like it. I've spoken to the men. It can lead to community college work which is paid for by the city 100%."

8. Problems with class scheduling, if any.

"There are trade-offs. We're robbing Peter to pay Paul. The least impact would occur in the winter. But we don't have any real problems and the politicians are tickled pink."

9. Degree of organizational commitment and support.

"Very committed. This is not a problem at all. Everything was very archaic. There is no opposition to improving our employees."

10. Overall reaction to work-site classes.

"They are at City Hall in the auditorium and Council Chambers. It's a nice clean work environment."

11. Overall benefits to organization, if any.

"The difference in supervisors will be an increase in education level by 40%. Some who today are semi-illiterate, will be able to handle administrative tasks."

12. Likelihood of recommending program to another employer with similar needs.

"Very likely. I have, to many. Definitely. To get the most out of your employees, you put things in."

13. Suggestions for program improvement.

"Smaller classes, ideally and more diversity. I wish it could go on another twenty weeks. The longer they go, the better."

EMPLOYEE EVALUATION INFORMATION

CLASS LOCATION: CITY OF NEW CARROLLTON, DEPARTMENT OF PUBLIC WORKS - THREE CLASSES

TEACHER: Mary Ellen Butlak

NUMBER OF CLASS SESSIONS: Forty, twice weekly. Two separate class terms were conducted: A twenty class semester from April 25 - July 18, 1991, and a twenty class term from July 25 - September 27, 1991.

CLASS SIZE AND TYPE: Seventeen; High level workplace related basic skills.

CLASSES ATTENDED: Range from 38 of 40 sessions to 5 of 7 sessions. Attendance as a function of actual class sessions enrolled: 88%.

RELEASE TIME? Yes.

STUDENT ASSESSMENT: MAPP/CASAS Placement and Survey Achievement Tests were administered to all students.

TEACHER: Phyllis Oarr

NUMBER OF CLASS SESSIONS: Forty, twice weekly. Two separate class terms were conducted: A twenty class semester from April 25 - July 18, 1991, and a twenty class term from July 19 - September 27, 1991.

CLASS SIZE AND TYPE: Ten; Beginning level basic skills.

CLASSES ATTENDED: Range from 39 of 40 sessions to 1 of 1 session. Attendance as a function of actual class sessions enrolled: 91%.

RELEASE TIME? Yes.

STUDENT ASSESSMENT: MAPP/CASAS Placement Tests and Survey Achievement Tests were administered to all students.

TEACHER: Christine B. Jones

NUMBER OF CLASS SESSIONS: Twenty, twice weekly from April 25 - July 18, 1991.

CLASS SIZE AND TYPE: Ten; Intermediate level basic skills.

CLASSES ATTENDED: Range from 20 of 20 sessions to 1 of 1 session. Attendance as a function of actual class sessions enrolled: 86%.

RELEASE TIME? Yes.

STUDENT ASSESSMENT: MAPP/CASAS Placement Tests and Survey Achievement Tests were administered to all students.

TOTAL NUMBER OF LEARNER SURVEY RESPONSES: 24

LENGTH OF PRESENT EMPLOYMENT: Twenty years (1); Seventeen years (1); Sixteen years (4); Fifteen years (1); Thirteen years (4); Eleven years (2); Ten years (2); Eight years (3); Two and 1/2 years (1); Two years (3); Six months (1); Four months (1); One month (2).

(In some cases, the following questions elicited more than one response:)

1. How Learned About Class: From a Friend at Work (3); From a meeting at work (9); From Supervisor (18).

2. Why Enrolled: To Better Myself (17); To Get a Better Job (5); To Learn to Read (4); To Learn English (4); To Get a GED (2); To Learn to Write (3); To Learn to Work With Numbers (6); To Be Able to Help My Children With School Work (6); "To refresh an thing that I have forgotten." (1); "To see what I could learn." (1); "to Lean More about read math English." (1); "Just for the hell of it." (1); "To refreash on thing I have not use in a long time." (1).

3. Helpfulness of Class: Extremely Helpful (15); Of Some Help (10); I Don't Know (1).

4. Skills Class Helped to Improve: Reading (13); Speaking (7); Writing (6); Performing Arithmetic (15); Self-discipline (7); Self-motivation (5); "getting back into the "Learning" Process." (1).

5. Helpfulness of Instructional Material: Easy to Learn (13); Somewhat Easy to Learn (10); Somewhat Difficult to Learn (1).

6. Degree to Which Found Program Interesting: Definitely Yes (17); Probably Yes (6); Probably Not (1).

7. Degree to Which Skills Learned Will Improve Job Performance: Definitely Yes (10); Probably Yes (8); Probably Not (4); Don't Know (2).

8. Degree to Which Program Was Taught at Appropriate Level: Definitely Yes (12); Probably Yes (7); Probably Not (4);

Don't Know (1).

9. Degree to Which Skills Learned Are Useful Outside of Class: Definitely Yes (18); Probably Yes (5); Probably Not (1).

10. Degree to Which Class Was What Expected: Definitely Yes (15); Probably Yes (7); Definitely Not (2).

11. Would Recommend Class to a Co-worker Who Needs It: Definitely Yes (21); Probably Yes (2); Probably Not (1).

(The following two questions were open-ended in nature. Answers are reproduced as written:)

12. What Learner Can Do That Could Not Do Before:

"The proper way to go solve a problem in the course or learning project."

"My math became a little better, also my writing improve."

"I can do my mathematics better."

"lean math as in division and more factions."

"My Reading is Improving Very Nicely."

"percentage."

"Everthing is about the same."

"Square footage."

"different kind of math & English dimension."

"I work with math and fractions much better."

"Work with numbers."

"Nothing."

"I can read a lot better. My math is slowly Improving."

"I got Better in Reading and Math."

"I Lean how do Faction."

"To think in the evening."

"Methematics. Reading Skills."

"I can not Do Math that well."

"read, write, add, multiply, subtract and divide fractions Decimals. I knew a little about it. This has been a refresher course."

"All of the things that I've Learned in this Class I learned in high school. So this class was an refresment Class."

"I have only been enrolled in this class for three weeks. During this time I have refreshed my skills with fraction."

"Fraction, decimals Fraction."

"I learn my Math & Writing better."

13. What Learner Would Change About the Program:

"I'd think they do a good job in teaching and have a great program going."

"Nothing." (10)

"Make it harder."

"It's A Very Nice program I Wouldn't change Any Thing."

"the time."

"Thanks."

"change the time 1.00. 3.30. P.M."

"School in the Fall Chage the Time Early in day."

"More class time." (5)

"More bookwork."

"For those who have really mastered the basic level of math, it would be very feasible to incorporate the intermediate level of math such as algebra, geometry and trigonometry."

7203 E. Ridge Dr.
Landover Md 20785
September 19, 1991

Mr. Richard L. Robbins
Director of Public Works
Department of Public Works
6318 Westbrook Drive
New Carrollton, Md 20784

Dear Mr Robbins:

Just a few word of thanks to let you know that I appreciate the opportunity to refresh some of thing I had forgotten. The weeks of class really brought back things like fractions, percent and measurements periodic table of elements. You really encourage me to go and get some of the [illegible] that was provided for me, so there is a little letter to say Thank you

Yours Truly,

BEST COPY AVAILABLE

9316 Cherryhill RD #303
College Park MD 20740
September 19, 1991

Mr Richard L Rollins
Director of Public Works
Department of Public [illegible]
6215 Westbrook Drive New Carrollton, MD 20784

Dear Mr. Rollins:

Thanks you for the opportunity of the classes that I attended. It helped me in my writing, mathematics and reading. In all of the elements that we did in the classes, I am sure that I got something out of them. It was a big help in the commercial driver's test and learning about banking and health advice. Working with maps, graphs and charts helped out too.

Thank you,
Ronald Camp

312

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11316 Kettering Ln
Upper Marlboro Md 20784
September 19, 1991

Mr. Richard L. Robbins
Director of Public Works
Department of Public Works
6318 Westbrook Drive
New Carrollton, Md 20784

Dear Mr. Robbins:

Thank you for giving me the opportunity to attend Class Most of the work was a review for me. Some of it I had forgotten. The one Subject that I wanted to learn in this class was to learn to work with square footage, Being that I am buying my first home Once again thank you and mary very much for making this possible

Sincerely Yours
Gerald W Curtis

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4009 Myers st
Capital Heights Md 20743
9/19/91

Mr. Richard L. Robbins
Director of Public Works
Department of Public Works
638 Westbrook Drive
New Carrollton, Md, 20784

Dear Mr. Robbins

I was made to write this Letter to you. At first I thought it was a bad idea. I want to not only say thank you for the class but, for the impact you have had on the Department of Public Work. Sixteen years I been looking for something to change. You came here and things started to change. not for the bad, but for mostly the good. The classes that we attented were very helpfut. The teacher that I had was great. The brushing up on my writing, math and my periodic table of elements. Although I didn't get to take the course that I wanted to this was A big help. So I want to say THANKS.

Your truly
Gregory Will

BEST COPY AVAILABLE

53[illegible] [illegible] Station Rd.
Owings MD 20736
September 19, 1991

Mr. Richard L. Robbins
Director of Public Works
Department of Public Works
6318 Westbrook Drive
New Carrollton, Md. 20784

Dear Mr Robbins ;

I want to thank you [illegible] the opportunity to attend basic [illegible] class. And review skills in Language + Mathematics + measurements.

Having the opportunity to go to school to practice reading + writing a[nd] also review the instruction for Commercial Drivers License was a big help. The [illegible] had so much to offer anyone. I want to thank you for The Opportunity.

Sincerely

Bobby C. [illegible]

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PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS WORKPLACE LITERACY SPRING/SUMMER, 1991 EMPLOYER EVALUATION SURVEY RESPONSES

RESPONDENT: Timothy Edwards, Director of Employee Relations

ORGANIZATION: Litton Systems, Inc., Amecom Division

DATE OF INTERVIEW: September 20, 1991

1. Regarding participating employees, job performance changes noticed or not.

"Yes. The feedback I've received from their supervisors is that there is an obvious improvement. They have more confidence and are more enthusiastic. Their conversational skills are much improved. They didn't used to use proper phrasing. They are more open to discussion. I'm impressed. They used to use only short phrases. Their language skills were keeping them down."

2. Changes in employee job attitudes noticed or not.

"Yes. That was the reference I made earlier. (*) Just what I told you. I've talked to the supervisors. One in particular, her demeanor was shy. Now, she talks right at me. Her letter (attached) tells more about it."

3. Indications of employee basic skills improvement seen or not.

"Yes. Their letters (attached) were constructed on their own. I've also heard from their coworkers and supervisors. They have much more confidence in their interactions."

4. (If #3 was "Did see indications of improvement) Improvement resulted in improved job performance or not.

"We just finished the program. I don't see how it couldn't. We have documented performance appraisals where people were held back because of their poor skills. For example, we couldn't put them on the phones. Now, their conversational skills are greatly improved. It's got to make a big difference."

5. Improved ability to communicate on job and solve job-related problems noticed or not.

"I can only tell you this. One is in accounting down the hall. She couldn't be put on the phone and now she can. I've seen it in my own interaction with them. There's a more obvious degree of confidence."

6. Number selected regarding instructional program effectiveness - On a scale of 5 to 1 where 5 = excellent and 1 = poor.

"I'd say "Four". She did a very good job. A portion of the way through, she was asked to gear it to the 'mill standard'. She did and then adjusted for those who did not need this. Audrey was very flexible and right on top of things. She treated them very well. They enjoyed going to the class. (*) I'm not sure that the course was long enough to get the results Audrey wanted. (*) I would love to do it again. We had expected to go into a production phase but that's been delayed. Also, they had paid time to attend. Right now we don't have the urgency and we're under a fiscal crunch."

7. Opinion about how well employees like the program.

"They loved it. They couldn't have been happier."

8. Problems with class scheduling, if any.

"No, none."

9. Degree of organizational commitment and support.

"Somewhat committed. They were very committed when we started. Put us in a more pragmatic stage and they'll be very committed again."

10. Overall reaction to work-site classes.

"I think it's excellent. Everybody wins. The Company gains positive relations. With the employees, it's made very convenient for them to attend when it's right on the site. You stand to get better participation."

11. Overall benefits to organization, if any.

"A more efficient, more capable work force. Someone who can converse and communicate are more valuable than those who can't. It's a good will effort. The feedback has been so positive. It's hard to put a tag on that good will."

12. Likelihood of recommending program to another employer with similar needs.

"Very likely. I'd highly recommend it."

13. Suggestions for program improvement.

"I'd be hard pressed to name one. I was extremely pleased with all the communications that came to me. The way it was set up was painless for a company."

EMPLOYEE EVALUATION INFORMATION

CLASS LOCATION: LITTON SYSTEMS, AMECOM - ONE CLASS

TEACHER: Audrey A. Parsons

NUMBER OF CLASS SESSIONS: Twenty-seven, twice weekly from May 29 - August 28, 1991.

CLASS SIZE AND TYPE: Eight; Workplace specific ESOL

CLASSES ATTENDED: Range from 26 of 27 sessions to 19 of 27 sessions. Average attendance: 87%.

RELEASE TIME? Yes, one-third.

STUDENT ASSESSMENT: The CASAS/ESL Test was administered and the "Workplace Literacy Analysis Individual Profile" was completed for all students.

NUMBER OF LEARNER SURVEY RESPONSES: 8

LENGTH OF PRESENT EMPLOYMENT: Eighteen years (1); Ten years (1); Nine years (1); Seven years (1); Six years (1); Five years (2); No response (1).

(In some cases, the following questions elicited more than one response:)

1. How Learned About Class: From a Friend at Work (2); From a Meeting at work (2); From Supervisor (3); From a Bulletin (2).
2. Why Enrolled: To Better Myself (3); To Get a Better Job (1); To Learn to Read (3); To Learn English (3); To Get a GED (2); To Learn to Write (4); To Learn to Work With Numbers (1); To Be Able to Help My Children With School Work (1).
3. Helpfulness of Class: Extremely Helpful (5); Of Some Help (3).
4. Skills Class Helped to Improve: Reading English (6); Speaking English (4); Writing English (7); Self-discipline (1); Self-motivation (1).
5. Helpfulness of Instructional Material: Easy to Learn (5); Somewhat Easy to Learn (1); Somewhat Difficult to Learn (2).
6. Degree to Which Found Program Interesting: Definitely Yes (5).

7. Degree to Which Skills Learned Will Improve Job Performance: Definitely Yes (5); Probably Yes (1).

8. Degree to Which Program Was Taught at Appropriate Level: Definitely Yes (3); Probably Yes (2); Probably Not (1).

9. Degree to Which Skills Learned Are Useful Outside of Class: Definitely Yes (4); Probably Yes (2).

10. Degree to Which Class Was What Expected: Definitely Yes (4); Probably Yes (2).

11. Would Recommend Class to a Co-worker Who Needs It: Definitely Yes (6).

(The following two questions were open-ended in nature. Answers are reproduced as written:)

12. What Learner Can Do That Could Not Do Before:

"This program help improve my reading and in writing."

"understand better."

"I think my pronunciation getting better. Some grammer and writing skills."

"Reading skill has improved."

"I read Better Know and Speak."

"I can handle better my work material, paperwork etc."

"I feel like I'm improving my writing, expelling, understand instructions, read better."

13. What Learner Would Change About the Program:

"The program should be a longer time period."

"change time for class."

"I liked it very much the way my teacher has taught."

"More help in writing and pronunciation."

"Maybe to have a better sequence."

4507-22nd Ave.
Mt. Rainier, MD 20712
August 28, 1991

Ms. Mary Butlak
Adult Education
Bladensburg Instrutional Center
Bladensburg, MD

Dear Ms. Butlak:

I like to take this opportunity to thank you and Mrs. Audrey Parsons for bring the Literacy Workplace Program to Litton-Amecom of College Park during the period of 29 May through 28 August 1991.

As a result of my attendance in this forty-hour course, I was better able to read and understand technical specifications associated with my work. In addition to this, I was also able to improve my ability to communicate both verbally and in writing.

I found this course both interesting and informative. Mrs. Audrey Parsons, my instructor, went to great length to use varied approaches in presenting her material. She also was exceptionally proficient in providing direction and guidance.In addition to this, she demonstrated commitment and dedication to her student. For these reasons, I would hope that the Literacy Workplace Program will be continued under her instruction at Litton-Amecom.

Once again, I thank you and Mrs. Audrey Parsons for this valuable educational experience.

Sincerely,

Frederick Lee

TO : MR. Tim Edwards
Personnel Department
From: Anthony Estrada
Analyst ProtoType Prod.
Date: August 28, 1991
Subject: APPRECIATION FOR ENGLISH CLASS

Thank you very much to Amecon Litto for giving The opportunity to attend, Work Place Program.

I'm really very happy because I learn English during this 40 hour class.

Also it helped me to understand, and have better communication to my Supervisor and Co-workers.

Cordially,

TO: TIM EDWARDS SUBJECT: LITERACY PROGRAM
FROM: CANDIDA VElAZQUEZ DATE: AUGUST 28, 1991

I WANT to Thank AMECOM LITTON, PERSONNEL DEPTO., And my SUPERVISOR, FOR THE opportunity To attend This class.

This program has helped me TO SPEAK ~~and~~ TO Spell, and To read.- I feel like me Pronunciation is much better.-

I'm looking For To attend The Following Forty hours, wich I Know The've Going To help me more.-

MR Edwards. ~~Timothy~~
Amecom Litton Div:
Dear MR. ~~Timothy~~: Edwards

I am very thankfu for your cooperation for let me Improve my knowlege in English.

In the period of three months, I really learned a lot. So thats why I would like if you can help with the company to extende the English, classes for longer period of time.

I also want to give my thank. to the Teacher because she really worked hard.

Sincerely
Walter Ang

SUBJECT: LITERACY WORKPLACE PROGRAM
TO: TIM EDWARDS
FROM: EDUARDO GAMEZ DATE: AUGUST 28, 1991

I like to Thank, Litton 'AMECOM' Human Resources Depto., and the manager of the clean Room for the opportunity to be part of this Program.

It's been a possitive experience and at the same time for the new subjects that we learned, such as: Vocabulary, letter formats, memorandums etc. etc.

I will be interest in the next Program, becouse I know I am Going to learn new Topics, and is going to be helhful and mi currently Job.-

DATE: AUGUST 28, 1991

SUBJECT: LITERACY WORKPLACE PROGRAM

TO: TIM EDWARDS

FROM: FREDERICK LEE

I LIKE TO TAKE THIS OPPORTUNITY TO THANK YOU AND LITTON-AMECOM FOR ARRANGING THE LITERACY WORKPLACE PROGRAM DURING THE PERIOD 29 MAY THROUGH 28 AUGUST 1991.

AS A RESULT OF MY ATTENDANCE IN THIS FORTY-HOUR COURSE, I WAS BETTER ABLE TO READ AND UNDERSTAND TECHNICAL SPECIFICATIONS ASSOCIATED WITH MY WORK. IN ADDITION TO THIS, I WAS ALSO ABLE TO IMPROVE MY ABILITY TO COMMUNICATE BOTH VERBALLY AND IN WRITING.

I FOUND THIS COURSE BOTH INTERESTING AND INFORMATIVE. MRS. AUDREY PARSONS, MY INSTRUCTOR, WENT TO GREAT LENGTH TO USE VARIED APPROACHES IN PRESENTING HER MATERIAL. SHE ALSO WAS EXCEPTIONALLY PROFICIENT IN PROVIDING DIRECTION AND GUIDANCE.IN ADDITION TO THIS, SHE DEMONSTRATED COMMITMENT AND DEDICATION TO HER STUDENT. FOR THESE REASONS, I WOULD HOPE THAT THE LITERACY WORKPLACE PROGRAM BE CONTINUED UNDER HER INSTRUCTION.

ONCE AGAIN, I THANK YOU AND LITTON-AMECOM FOR THIS VALUABLE EDUCATIONAL EXPERIENCE.

Litton
Amecom

OFFICE CORRESPONDENCE

File:
Date: August 28, 1991

Subject: LITERACY WORKPLACE PROGRAM

To: T. Edward
From: L. Phan

Copies to: G. Hall
Mary Bullack
Audrey Parsons

I would like to thank you, the company, and my supervisor for the opportunity to have attended this class.

In the first half of the program, most of what the instructor taught was related to assembly. Because I am an office clerk, I thought I had gotten into the wrong program, so I talked to my supervisor, and my supervisor then talked to you about what I thought, and you then mentioned the problem to the program instructor. After that, the instructor found out what focus I really needed. She had teached some differences that why I continued then finished the program, and I had learned some grammar, writting skills, and pronunciations.

The rest of the program went by fast. Today is the last day for this class. I did improve some on English as my second langue, because some of my friends have noticed, and so had Charled Dausch (my first supervisor in Finance Department at Amecom)

I would really like to attend another 40 hours. But, right now I think I must use my time to learn Wordperfect, because that is most important for my duties right now. Thank again,

PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS WORKPLACE LITERACY
SPRING/SUMMER, 1991 EMPLOYER EVALUATION SURVEY RESPONSES

RESPONDENT: Rosalie Evans, Operations Officer

ORGANIZATION: Sovran Bank

DATE OF INTERVIEW: August 9, 1991

1. Regarding participating employees, job performance changes noticed or not.

"I haven't asked yet."

2. Changes in employee job attitudes noticed or not.

"No. The program hasn't been in place long enough to ask."

3. Indications of employee basic skills improvement seen or not.

"Yes. In talking with them. I've noticed that pronunciation skills are better. Less hesitation in talking."

4. (If #3 was "Did see indications of improvement) Improvement resulted in improved job performance or not.

"I don't have any evidence that it does, but I personally believe that it would."

5. Improved ability to communicate on job and solve job-related problems noticed or not.

"I haven't looked into that."

6. Number selected regarding instructional program effectiveness - On a scale of 5 to 1 where 5 = excellent and 1 = poor.

"I have two instructors. One I would rate a 5, the other a 2. There is a new person I haven't talked to. (2?) I shouldn't elaborate on that. Attendance dropped way off. There is a problem in dealing with a high level class who are well educated in their own country. The class is geared for those without the high level of ability."

7. Opinion about how well employees like the program.

"The employees I've talked to really like the program and value it. Those who originally attended and stopped were disappointed. I can't put my finger on it. The others enjoy it very much."

8. Problems with class scheduling, if any.

"No. It's done on a Saturday. Once, systems were down and work cut in. Attendance is related to personal things like doctors appointments and weddings."

9. Degree of organizational commitment and support.

"They are waiting to see results. If this one class goes down the tubes, it will have an effect on the commitment. When I was told that attendance had dropped, I was concerned. I hadn't been told until they decided to drop the class. I didn't know why the attendance had dropped. No one tried to find out why. You need to do that before you abandon your efforts. (*) It's the high level group. It should be a legitimate concern - the ability of the teacher to reach them. That was the problem."

10. Overall reaction to work-site classes.

"Very positive. I worked a long time to get them and I'm really pleased."

11. Overall benefits to organization, if any.

"It gives our employees more flexibility in how they fit in. If their job goes away, they have a better chance of getting another one." It allows us to tap more of their potential.

12. Likelihood of recommending program to another employer with similar needs.

"Very likely. The experience of at least the one instructor. The P.G. Schools has the most experience at providing a program of anyone. They seem to be committed to doing a good job. There is a cooperative attitude."

13. Suggestions for program improvement.

"I'd like to see more structure in the lessons. A better attempt to reach the higher level people. One of the instructors has taken time to tour the Operations Center with me and then talking to her students. That kind of thing is extremely valuable. They need to know how the organization functions. We spent two or three hours. It made her a far better instructor."

EMPLOYEE EVALUATION INFORMATION

CLASS LOCATION: SOVRAN BANK - TWO CLASSES

TEACHER: Fran Prenetta

NUMBER OF CLASS SESSIONS: 12 On Saturday mornings from June 1, 1991 To August 24, 1991.

CLASS SIZE, TYPE AND NUMBER OF SURVEY RESPONSES: 8; Workplace specific upper level ESL; N=5

CLASSES ATTENDED: Range: 4-12; Average: 9.4

TEACHER: Sally Crouch

NUMBER OF CLASS SESSIONS: 13 On Saturday mornings from June 1, 1991 To August 31, 1991.

CLASS SIZE, TYPE AND NUMBER OF SURVEY RESPONSES: 15, 5 of whom did not enter until August; Workplace specific upper level ESL; N=5

CLASSES ATTENDED: For June 1st group - Range: 1-9; Average: 4.3. For August group - Range 1-5; Average 2.8. Attendance as a function of actual class sessions enrolled: 85%

RELEASE TIME? No

STUDENT ASSESSMENT: The CASAS/ESL Test was administered and the "Workplace Literacy Analysis Individual Profile" was completed for all students.

LEARNER SURVEY RESPONSES:

LENGTH OF PRESENT EMPLOYMENT: 3 years (2); 2 and 1/2 years (2); Two years (1); 20 months (1); 18 months (2).

(In some cases, the following questions elicited more than one response:)

1. How Learned About Class: From a Friend at Work (4); From Supervisor (5); From a Bulletin (2).
2. Why Enrolled: To Better Myself (7); To get a Better Job(3); To Learn English (5); To Get A GED (2); To Learn to Write (2); To be Able to Help My Children With School Work (1); To Learn to Read (1).

3. Helpfulness of Class: Extremely Helpful (8); Of Some Help

4. Skills Class Helped to Improve: Reading English (5); Speaking English (9); Writing English (6); Self discipline (1); Self-motivation (1).

5. Helpfulness of Instructional Material: Easy to Learn (5); Somewhat Easy to Learn (40; Somewhat Difficult to Learn (1).

6. Degree to Which Skills Learned Will Improve Job Performance: Definitely Yes (7); Probably Yes (2).

7. Degree to Which Skills Learned Will Improve Job Performance: Definitely Yes (7); Probably Yes (2).

8. Degree to Which Program Was Taught at Appropriate Level: Definitely Yes (6); Probably Yes (3).

9. Degree to Which Skills Learned Are Useful Outside of Class: Definitely Yes (8); Probably Yes (1).

10. Degree to Which Class Was What Expected: Definitely Yes (7); Probably Was (2).

11. Would Recommend Class to a Co-worker Who Needs It: Definitely Yes (9).

(The following two questions were open-ended in nature. Answers are reproduced as written:)

12. What Learner Can Do That Could Not Do Before:

> "It helps me alot. I learned a lot of vocabulary too So, I can understand English so easy (but not real well."
>
> "Now I can speak better then before & understand better News and News papers."
>
> "Now I can speak with everybody. I not afraid any more. I can communicate with my co workers and supervisor. Thanks to Fran. She is a very nice teacher. She is so pacient with all the students. She really now how to teach."
>
> "Now. I can talk without grammer mistakes."
>
> "I can speak English."

"Now I can speak, understand and read more fluently than before. I'm very happy with this classes and their wonderful organization,."

" The course I attended helped me a lot in the vocabulary and the accent and I could easily understand the communication with the other co-workers. If I didn't do it, I could have some problems in communication."

13. What Learner Would Change About the Program:

"N/A"

"I think we need more time for speeking and talking to each other. Because our problems is to understand and speeking power."

"If I can change something. I hope we can stay more hours every week."

"I don't want to change anything about this program."

"None."

"More homework exercises for writing skills."

"Nothing."

"I really suggest the computer access may help me a lot. It would be appreciable of the learning of the computer."

PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS WORKPLACE LITERACY
1991-92 EMPLOYER EVALUATION

THE PURPOSE OF THIS INTERVIEW IS TO SOLICIT YOUR VIEWS AND OPINIONS OF THE WORKPLACE LEARNING PROGRAM WHICH IS BEING PROVIDED AT YOUR WORKPLACE BY THE ADULT EDUCATION OFFICE OF THE PRINCE GEORGE'S COUNTY PUBLIC SCHOOL SYSTEM. SINCE WE ARE AFTER YOUR OWN PERSONAL VIEWS AND OPINIONS, OBVIOUSLY THERE ARE NO RIGHT OR WRONG ANSWERS TO ANY QUESTIONS; JUST YOUR ANSWERS.

FIRST OF ALL, I'D LIKE TO ASK YOU ABOUT THE EMPLOYEES WHO ARE PARTICIPATING:

1. HAVE YOU NOTICED ANY CHANGES IN THEIR JOB PERFORMANCE OR NOT? (YES NO CIRCLE ONE. IF "YES", ASK) WHAT HAVE YOU NOTICED? ______________________________

2. WHAT ABOUT THEIR WORK ATTITUDES? HAVE YOU NOTICED ANY CHANGES IN THEIR ATTITUDES TOWARD THEIR JOBS OR NOT? (YES NO IF "YES") WHAT HAVE YOU NOTICED?

3. HAVE YOU SEEN ANY INDICATIONS THAT THEIR BASIC SKILLS HAVE IMPROVED? (IF "YES") WHAT THINGS HAVE YOU NOTICED?

4. (IF #3 WAS "YES") DO YOU THINK THAT THIS IMPROVEMENT HAS RESULTED IN THE PARTICIPANTS BEING ABLE TO DO THEIR JOBS BETTER OR NOT? WHY DO YOU SAY THAT?

5. HAVE YOU NOTICED IF THEY HAVE IMPROVED IN THEIR ABILITIES TO COMMUNICATE ON THE JOB AND TO SOLVE JOB RELATED PROBLEMS ANY BETTER? (IF "YES") WHAT HAVE YOU NOTICED?

NOW, TURNING TO THE INSTRUCTIONAL PROGRAM FOR A MOMENT. THINKING ABOUT THE TEACHER'S EFFECTIVENESS AND WHAT IS BEING TAUGHT.

6. ON A SCALE OF 5-1, WITH 5 BEING EXCELLENT DOWN TO A ONE MEANING POOR, WHAT NUMBER WOULD YOU PICK TO RATE THE INSTRUCTION? (1 2 3 4 5) WHY DID YOU SELECT THAT NUMBER?

7. HOW WELL DO YOU THINK THE EMPLOYEES LIKE THIS PROGRAM? WOULD YOU SAY VERY MUCH, NOT TOO MUCH, OR NOT AT ALL? WHY DO YOU THINK SO?

8. HAS THERE BEEN ANY PROBLEM WITH CLASS SCHEDULING? THAT IS, HAS THERE BEEN ANY MAJOR CONFLICT WITH WORK SCHEDULES OR THE PEOPLE GETTING THEIR WORK DONE OR NOT? (IF "YES) WHAT WERE THESE PROBLEMS?

9. HOW ABOUT YOUR ORGANIZATION'S SUPPORT? HOW COMMITTED DO YOU BELIEVE THEM TO BE TO THIS PROGRAM; VERY COMMITTED, SOMEWHAT COMMITTED, OR NOT VERY COMMITTED? WHY DO YOU SAY SO?

10. WHAT IS YOUR OVERALL REACTION TO HAVING CLASSES AT THIS WORK SITE?

11. WHAT ARE THE OVERALL BENEFITS, IF ANY, OF THIS PROGRAM TO YOUR ORGANIZATION?

12. HOW LIKELY WOULD YOU BE TO RECOMMEND THIS PROGRAM TO ANOTHER EMPLOYER WHO MIGHT HAVE NEEDS SIMILAR TO YOURS? WOULD YOU BE VERY LIKELY, SOMEWHAT LIKELY, OR NOT VERY LIKELY? THAT WOULD BE BECAUSE?

13. FINALLY, WHAT SUGGESTIONS DO YOU HAVE TO MAKE THIS PROGRAM BETTER THAN IT IS NOW?

NAME:
WORKSITE:
DATE:

Prince George's County

Workplace Literacy

Learner Survey Sheet

Directions: Please answer each question below. The information you give will be used to evaluate and help improve the course materials you have used.

I. Background Information

1. How long have you worked for this employer? ______________________________

2. What is your job title? ____

3. How many classes did you attend? ____

II. Course Information

Mark an X on the line beside your response. Mark more than one X if you have more than one response.

4. How did you find out about this class?

___a. From a friend at work
___b. From a meeting at work
___c. From a supervisor
___d. From a bulletin

5. Why did you enroll in this class?

___a. To better myself
___b. To get a better job
___c. To learn to read
___d. To learn to write
___e. To learn to work with numbers
___f. To learn English
___g. To get a GED
___h. To be able to help my children with school work
___i. If you have another reason, please write it: ______________________
____
____

6. In relation to your answer for number five(the previous question), how helpful do you think this class has been for you?

___a. Extremely helpful
___b. Of some help
___c. Almost no help
___d. No help at all
___e. I don't know

7.. What skills do you believe this class has helped you to improve?

___a. Reading English
___b. Speaking English
___c. Writing English
___d. Performing arithmetic
___e. Self-discipline (regulating yourself for the sake of improvement)
___f. Self-motivation (causing yourself to act)
___g. None of these skills
___h. Other skills. If you believe you have improved other skills please list: ____
____

III. Please write your ideas about the following questions.

15. What can you do now that you couldn't do before?

16. If you could change anything about this program, what would it be?

Thank you for taking the time to help evaluate this course. Your answers will be very useful in trying to make it better.

PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS WORKPLACE LITERACY
SECOND EVALUATION REPORT
MAY 4, 1992

SUBMITTED BY JOHN P. CREIGHTON AS OUTSIDE EVALUATOR

The primary objective of this report is to describe and evaluate the program's workplace materials in use and the workplace relatedness of curricula. It essentially answers the evaluation question, "To what extent is what is taught to participating employees related to what they actually do on the job?"

The most appropriate context for this evaluative question is described by Thomas G. Sticht in his April 20, 1991 report, Evaluating National Workplace Literacy Programs. His report makes the following statements:

- "Quality of Training" evaluation criteria must include the use of curriculum materials designed for adults that reflect the needs of the workplace.
- The general purpose of the National Workplace Literacy Program (NWLP) is to improve the productivity of the workforce through the improvement of literacy skills in the workplace. The basic assumption is that there is a relationship between the two.
- Program factors must demonstrate a strong relationship between the skills taught and the literacy requirements of actual jobs. Curriculum materials must reflect the needs of the workplace.
- The measurement of literacy abilities ought to reflect the content of what is being taught. Content has the best chance of being transferred to the job if it consists of the materials and content needed for getting and performing a job.
- One of the goals of evaluation is to permit the improvement of programs. Evaluation information should be used to modify programs to make them more effective.

An additional theoretical construct for this approach comes from Thomas G. Sticht's Functional Context Education: Learning For and In The World of Work (June, 1991). In arguing for a functional context approach, Sticht disagrees with the notion of first learning basic skills in a decontextualized manner, and then applying them. He believes it infinitely better to teach those specific basic skills tasks which are inherent in learning and performing the job.

CE 062 794

This approach is more effective in initial learning and long term retention, and less expensive than teaching basic skills first and job skills later.

During the time span covered in this report, ten sites were in operation. I made site visitations to those sites that I had not visited previously. I observed classes in session and examined assessment/audit techniques, workplace class materials and curricula in use.

At those sites which were new during this reporting period, I interviewed the appropriate worksite contact person. I used the same questionnaire instrument which I developed for the first reporting period. Interview responses are included in this report.

Teachers maintained comprehensive curriculum binders which I carefully reviewed. Samples of instructional materials in actual use are included in this report, sorted by site.

The following are findings and recommendations by participating site:

LITTON SYSTEMS DIVISION, AMECOM

This organization is in the business of highly technical and specialized defense contracting work. Class participants were high level ESL foreign-born employees.

Commendation:

The literacy audit/task analysis process and the curricular response to identified needs at this site were outstanding as the following information will demonstrate.

The audit/assessment process used at this site revealed six major areas of need:

o As a condition of maintaining their employment, employees must take a preparatory course and pass a military standard certification examination. The course is called, "MIL-STD 2000". The "Operator Certification Course Outline" as well as the course handbook were incorporated into the workplace curriculum.

  One methodology used was for students to take turns reading a question with the group answering it. Students learned to summarize the questions.

- Electrostatic discharge is a critical problem which can damage or destroy electronic components. The company's "Guard Against Static Discharge" manual also was part of the curriculum with emphases on vocabulary, pronunciation and understanding.

- Also in use is a company document entitled, "Standard Terms and Definitions" which delineates the technical language used in the plant.

- A need was expressed for Litton's employee related materials to be understood. Among the materials used were Litton's Employee Handbook (terms like exempt and non-exempt employees were examined), the performance review process and its criteria, grievance procedures, and information related to personnel records. Participants learned about company benefits for part-time employees, and policies concerning overtime pay, leave time accumulation, and special leaves.

- Both the employer and the employees identified a need for improved communication. The primary concern expressed was a need for improved abilities in speaking, reading, writing and understanding English.

  Specifically, the learners shared with their instructor copies of the kinds of materials they read on the job. They also expressed a need to better understand written instructions and to improve their own writing abilities. Memo writing and note-taking skills were among those taught.

  Further diagnosis of skills competencies required were accomplished through the administration of a locally developed (Prince George's County) ESL placement test. Written exercises completed upon program entry were compared with written exercises at the time of exit.

  Each student dictated to the teacher a description of his/her typical day on the job. The instructor copied this oral description verbatim. **These documents became valuable and appreciated resources for many subsequent learning activities.**

- Speaking and listening activities included students pairing off and explaining their jobs to one another with the listener writing down in expository style what he or she heard.

- The company was recently forced to lay off some its workers with additional lay offs possible. Participants expressed a fear of job loss and a consequent need for job change skills and job finding information.

Class activities included writing letters of application, understanding classified ads for employment and the abbreviations used, completing an employment application, and composing a resumè.

Commendation:

Workplace ESL programs should properly differ from the more traditional ESL classes. In my opinion, this workplace program represents an exemplary site, particularly as a workplace literacy program for high level ESL students.

CITY OF NEW CARROLLTON, DEPARTMENT OF PUBLIC WORKS

Jobs at this site include such assignments as truck maintenance, custodian, truck driver, and crew member. Many of the Public Works Department's participating employees travel about the city by truck to perform their duties. As with Litton Systems, this was a site described in my first report. As that report stated, this site's participants included many who expressed a strong need and interest in improving their math abilities.

From April to August, 1991, three ABE classes were conducted; one low level, one intermediate level, and one for a higher skilled group. The intermediate level instructor left the program during the summer and her students were divided between the other two teachers. Therefore, beginning in September, two classes were conducted.

Workplace skills taught included interpreting a City of New Carrollton map and road and shopping center signs.

Reading skills included the reading of street signs and symbols, using a city directory, finding specific information about city events, and locating information about service companies. The interpretation of identification and directional signs also was addressed.

Other workplace areas included regulatory, warning & guide signs; computing mileage and determining or estimating costs, time and materials; following written and/or illustrated directions (manuals, installation guides); using a table of contents, index, and glossary; estimating job needs; and using reference materials.

In addition to basic computation and problem-solving, the math work encompassed interpreting graphs, tables and diagrams, report writing, using percent to figure paycheck deductions and for mixing paint and concrete; calculating purchase orders and taxes; and understanding investment plans.

The curriculum also covered understanding paychecks, employee benefits and money management; calculating man-hours and materials for jobs, calculating mileage, using geometry to measure for carpentry, painting and grounds work; writing accident reports and work orders, job status and job description reports, completing maintenance charts and records, converting Fahrenheit to centigrade as needed in HVAC shop, and solving heat and pressure problems.

Materials included in the addendum for this site includes an Injury Report form, a vehicle preventive maintenance form, and computer generated Current Month Completed Work Orders.

One curriculum binder from this site contained no materials which came directly from the work site. While the "Workplace Task" sheets sometimes alluded to workplace materials, all of the instructional materials submitted were commercially published. In some cases, these materials were remote from the lives and the work of the participants. Examples are the use of map and hotel accommodations materials about North Carolina and Duke University, and city information about Durham, North Carolina and Denver, Colorado. In this one case alone, I found no evidence of using math skills to deal with workplace problems.

The other curriculum binders were excellent. The one used for the low level group related to the teacher's work with a low level group of virtual nonreaders. It reflected reading and vocabulary skills related to such areas as learning trash route street names, directions for pick-ups, work orders, work-related abbreviations, occupational specific forms, following oral directions, and printing legibly.

Work specific materials included a City of New Carrollton Street Directory (with the streets on the learners routes highlighted), an in-order listing of streets on routes, a map of those streets, directional orientation of one street or landmark from another, calendar and number work, identifying regulatory, service and guide street signs, and signs denoting potential dangers and hazards.

The second class was composed of intermediate and high level ABE students. Their work tasks included grass cutting, street repair, trash removal, small scale construction, pest control, writing work orders, taking phone messages, completing forms, and operating and maintaining town vehicles.

The Public Works Director shared his interest in promoting three of these men to supervisory positions and arranging tuition reimbursement for them - upon completion of this course - to take community college courses..

Skills required for the jobs of this group include map reading, giving and taking directions, and measurement skills.

The students expressed a great interest in learning more about banking, budgeting and borrowing money. The instructor is commended for having arranged for a representative from a large bank to conduct a class seminar on banking processes and procedures.

Her teaching included writing skills for work reports, reading and interpreting work-related materials, organizational skills, and some occupationally-specific math including measurement.

Curricular materials used included planning tools, test-taking techniques, telephone usage, emergency measures to take, reading signs and labels, workplace diagrams, following work procedures, map reading, pay stubs, and health materials supplied by the county health department (A health nurse also visited this class).

While math materials in the binder were from general published materials, work orders, hazardous materials information, and New Carrollton maps were utilized.

The workplace literacy audit for the high level ABE group revealed the following:

Employees need to be able to read and comprehend chemical labels, hazardous chemical safety sheets, equipment instructions, and regulations related to compliance, the environment, and Department of Transportation regulations. They need to be able to compute quantities of construction materials, numbers of plant types and amounts of growth, and herbicide and insecticide chemical quantities needed.

Commendation:

This information was synthesized in a very useful document called, "Request Form For Information To Be Used In The ABE-In-Industry Curriculum". The program is commended for going a step beyond the usual audit or task analysis process, and developing and using this form to synthesize information.

The work tasks for this high level ABE class included grass cutting, street repair, trash removal, small scale construction, pest control, writing work orders, taking phone messages, completing forms, and operating and maintaining town motor vehicles.

CASAS ECS assessments were conducted and CASAS class and individual profiles were developed. A CASAS Workplace Literacy Analysis also was done.

Some students needed to prepare for the Commercial Driver's License (CDL) test. CDL materials used included the manual itself, video tapes and related CDL manual materials, and sample tests.

Commendation:

Another commendation is in order here to this teacher for arranging for a police officer to visit the class to assist them in reviewing these materials.

Writing exercises included business letters, work orders, requests, purchase orders, and work forms completion.

In addition to the CDL materials, reading work included hazardous materials work sheets, memos, manuals, bulletins, work schedules, and town maps.

Oral communication skills were stressed in order to improve co-worker relations on the job.

Computational skills addressed quantities needed for construction projects, estimating costs, purchasing supplies, pay withholding, and retirement benefits.

SOVRAN BANK OPERATIONS CENTER:

These students were foreign-born employees. The main program emphasis was the improvement of English language ability. No release time was offered. Students returned to the work site on Saturday mornings to attend classes. Many came from a considerable distance, some from as far away as Alexandria, Virginia. Workplace-ESL would best describe these classes.

One teacher's plans included a basic computer course which was highly relevant to this group. Included were an introduction to computer terminology, basic programming, and uses of spreadsheets and word processing.

There was a real prospect of job loss and a concern on the part of both the students and bank management to provide the participants with job seeking and finding skills. Therefore, this class included resumé writing, interviews, cover letters, answering ads, and completing job applications. Oral English exercises simulated job interviews and practiced conversation around job-related questions.

The balance of the ESL component related to language development in reading, writing, vocabulary development, spelling, and the improvement of oral English ability. The instructional materials submitted by this instructor were not directly workplace related.

The second teacher's plans, however, reflected much greater attention to workplace relatedness. Lessons related to major banking laws and regulations, company benefits available to employees and procedures for applying for them; completion of claims forms, work-related conversational English, standard operating procedures at the bank, the Federal Reserve System, interpreting the bank's newsletter, workplace abbreviations and acronyms, and workplace forms completion.

It would have been useful for this teacher to have included samples of the materials which she used for these lessons.

PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS' FACILITIES DEPARTMENT AT BROWN STATION ROAD:

Classes continued at this site which was evaluated in my first report.

The Workplace Task section of the teacher's binder reflected lessons concerning the recognition and use of regulatory signs and signs concerning warnings, services, streets and highways, and guide signs. Other workplace tasks covered included determining carton shipping costs, schedule information, determining mileages and distances, estimating time and materials costs, following written and illustrated directions, and following instructional manuals and installation guides.

I know this teacher to be an outstanding workplace literacy instructor who is a proponent and user of materials from the worksite. Unfortunately, the materials section of this binder did not include any workplace materials.

GRACE CULINARY ARTS (Food Service Division of W. R. Grace Company), 8003 Laurel Lakes Court, Laurel, MD.

This site is a large food processing, cooking, packaging, and distribution facility which sells a wide variety of food products in the wholesale market place. Eighty-five percent of the employees are young Hispanics. Many are not literate in Spanish. Virtually all of this group work in food preparation, packaging and distribution areas in non-supervisory positions.

No release time was offered at this site. For the most part, classes were scheduled at the time of shift changes. Nearly all of the participants lived some distance from the plant and were totally dependent upon car pools provided by other employees.

Classes met on Mondays and Wednesdays from 3-4 p.m. and from 4-5 p.m. Tuesday and Thursday classes met from 6:30 to 7:30 p.m. Five classes began at this site on October 1, 1991. The last class ended on December 26, 1991. Twenty-eight class sessions were held for a total of 126 instructional hours.

Classes began with a total enrollment of 62 students. At the tenth class interval, enrollment had dropped to 19. By the 28th class, only nine were attending consistently.

One teacher submitted a two-page report listing her perceptions of this program's high attrition rate Here are some of her perceptions:

"This program was relatively short-lived and the class was terminated on December 26, 1991 after 28 classes.. She cited two reasons: lack of managerial support and lack of student commitment. The majority of management did not view these classes as a priority. They took no action to alleviate a growing problem of absenteeism. Some managers were unaware of which workers were attending classes or of class schedules. Some did not support the need for their workers to leave work stations to attend class.

"It appears that many of the enrollees were initially coerced into registering for classes. A survey of non-attenders revealed that the primary reason given for non-attendance was that their supervisors would not allow them to leave their work stations. She believes this to be only partially true. Participants were low level ESL students, many non-literate in their native language. She feels that many of them had been living and working here for considerable time without having a compelling need to learn English.

This teacher recommends that future programs be based on a contractual agreement with a company outlining the program's goals and objectives and specifying company commitment and support. Both teachers at this site believed that it was more important to the company for their workers to be on the line rather than in class.

Workplace materials used here included temperature control chart reading, completion of product and production code forms, work orders, weight and temperature control charts, and package labels. Some of these are included in the addenda.

On April 3, 1992, I formally interviewed Ms. Cheryl Ali, Production Administrator and Interpreter. I also informally spoke with Ms. Patricia Watkins, Payroll Manager. Their comments generally substantiate the teacher's perceptions of the attrition problem, as quoted from this interview. Ms. Ali's responses were as follows:

Job performance changes noticed: "Not really. It's hard to say. Some of them are trying to communicate better with their supervisors. I think they can communicate better than they sometimes let on."

Regarding work attitude changes noticed: "That's hard to say. We'd have to ask the supervisors."

Indications that basic skills have improved? "Yes. It's a must for them in a plant that deals with food. They have to read recipes and product names. Everything is labeled. It's critical to send the correct product out. (Improved?) It's better now than it was."

Improvement resulted in participants doing their jobs better or not: "Yes. Because they are in trouble if they don't. (Trouble?) It's really not related to the class. Their jobs don't require that much skills."

Improved abilities to communicate on the job and solve job-related problems: "Some of them have. Some of the kids will come to me and speak in English now. Not too many. They speak to their supervisor in English more - some of them."

1-5 instructional rating: "5. I assisted one day at the classes. I liked very much how she was dealing with everybody. The classes were interesting, not boring. By the second class, she was calling everyone by name. She knew what everybody needed."

Perception of how well employees like the program: "This has different parts for me to answer. The class in general should have been divided into different levels. Some knew some English and some didn't."

Problems with class scheduling or conflict with work schedules? (N.B. No release time was offered at this site for employees to attend classes) "Yes. There were conflicts between the job requirements. They would come up when the class was scheduled to meet. Then something else might come up where they couldn't leave to go to class. Then they might have to leave to go home. Many of them depend on rides. At least 85% depend on car pools to get home. The classes were before or after the shifts. (Shifts?) Day is six to four; evening form four to nine or twelve.

The classes ran each hour from three to about six and there was 7-8 p.m. evening, two evenings."

Organizational support and commitment: "Not very committed. We tried for two years to get this program activated. (Commitment?) They would have made an effort to arrange the schedules and arrange for car pools. Production has to be number one. You don't leave your job until your work is done."

Overall reaction to work site classes: "I was elated. We tried to arrange everything for the kids. We tried to do everything. We called every school system around to try to get something."

Overall benefits to organization: "We can pick up more supervisors. They can be promoted. (Else?) The workers feel more confident. They are not limited to speaking only to their Spanish friends."

Likelihood of recommending program: "Very likely. I'd recommend it here again. The classes had really dwindled. I was very frustrated. I talked to people about why they dropped. Some said it was too easy. Others said it was too difficult."

Suggestions to make program better: "Hold classes by ability level. Have a test to see how much they know - how much English they know. The ones who know some English need to learn how to read and write. Many don't know how to read and write in Spanish. (Else?) Maybe if we had one hour a week of concentrated study."

I led a discussion of the potential for renewing classes at this site with attention to the modifications recommended. Pat Watkins is going to contact the Grace Company's corporate headquarters in Boca Raton, Florida to determine if they would grant release time to some employees. I made it clear that any plans for future classes would be predicated upon our being awarded a grant for next year. Their idea is to screen participants carefully and, if approved, grant release time to about 45 approved employees.

Recommendations:

1. To the extent possible to do so - given work schedules - at all sites where enrollment warrants it, group participants by ability levels as indicated by assessment results.

2. Develop an attendance reporting system for worksite teachers to notify the worksite literacy supervisor of any greater than anticipated participant attrition.

Where such attrition is occurring, the worksite supervisor should confer with the worksite contact person to determine causes and, if appropriate, to make modifications. In the case of Grace Culinary, Ms. Ali attempted to find out what had gone wrong. Her attempts, however, were somewhat random and sporadic in nature and appear to me to have been made after the fact when little could be done.

The teacher's report on attendance problems reflects perceived reasons for attrition which are similar to those stated by Ms. Ali and Ms. Watkins. My view is that a more formal and more timely investigation of attrition problems would be worth the time and effort involved and would allow for program modifications to be made, if warranted.

COMPUTER SCIENCES CORPORATION, 4600 Powder Mill Road, Beltsville.

This company is the prime contractor and Loral Aerosys Division of Loral Corporation is a sub-contractor to them. The student population was from both of these organizations.

The population served were highly professional with English as their second language. Their needs were to improve their English language fluency and their technical writing skills. Most have graduate degrees in technical areas and do not need the more typical workplace-related literacy skills. Initial enrollment was nineteen.

Classes were conducted Mondays and Thursdays from 5:30 - 7:30 p.m. for ten weeks, for a total of forty instructional hours .

Attendance at this site was somewhat sporadic and there is a relatively complex explanation for it:

1. None of the students work in the building in which the class is located. They come from different areas, some as far away as Reston, Virginia.

2. In some cases, class schedules were in conflict with courses which they were taking at the University of Maryland.

3. Participating employees work as part of a work team. They would have to leave the team to attend class at a time when the team needed them.

I observed classes at this site on December 5, 1991.

One instructor teaches upper level ESL. The other teaches Technical Writing on Mondays. I observed a linguistics class which was taught on Thursdays. It dealt with diction & phonics.

Five students were in attendance the evening of my visit. The teacher's objective is to help them to improve their oral presentations; to speak without notes. They were retaping what was read on the first night of class as a post-test.

Workplace materials suitable for this ESL population were used.

Student assessment included the administration of the STEL Intermediate Level Form I as a pre-test. The Intermediate Form II was used a a post-test. The students tape-recorded their speech patterns at the beginning of the term and re-recorded at the end of the course to measure improvement.

Speaking and listening skill improvement included spontaneous speaking as in talking with supervisors and co-workers.

Because of the workplace need and interest, technical writing was stressed in this course. This work encompassed analyzing one's audience, brainstorming, outlining, pre-writing, drafting, revising, and many other elements of the technical writing process such as style, grammar, and punctuation. The uses of technical writing in the workplace were enumerated. Materials used in this process were a technical writing manual and a second manual, Just Plain English, developed by the U.S. Air Force Academy. All of these materials were included in the curriculum binder submitted.

Other examples of workplace materials used are included as addenda. They are technical in nature. Also attached are representative samples of the students' writing which describe their own perceptions of their learning needs.

On April 28, 1992 I interviewed Ms. Nancy Coffey, Supervisor of Employee Benefits and Programs, at the Seabrook office of Loral Aerosys Division. Her responses were as follows:

To noticing changes in participant job performance: "No. I have talked to their supervisors and there hasn't been any change in their performance, but they were performing fine before."

"No" to noticing changes in their work attitudes. "Their attitudes were fine prior to starting this."

"Yes" to indications of basic skills improvement. "They've probably improved some, yes. (How know?) Their supervisors have told me. These people have highly technical skills and advanced degrees. Their desire to improve their English is there."

Did this improvement result in better job performance? "Their job performance was not an issue."

Noticed improved ability to communicate and solve job-related problems? "I've really not heard that they can communicate better. But I don't think that's a reflection of the program. They need to work on just diction. They know how to speak English."

Selected "5" on a 1-5 scale to rate the instruction, with five signifying excellent. "I think the teachers were very adaptive to this group of individuals. They adapted the program to the extent they could to meet the needs of this group."

Perception of how well employees like program. "They liked it - the ones that stuck it out."

Problems or conflicts with class schedules: "We had it at five o'clock so there wasn't any conflict with work. But there was conflict because many of these people go to classes after work hours. (Classes?) They were taking university courses."

"Very committed" in response to organizational support and commitment. "This was something that came up through the ranks and management requested that we look into it."

Overall reaction to work site classes? "I think it was great. I think that it needed to be a little more at a different level to be of optimum value to these people. (Meaning?) They know how to order their hamburgers. They have been in this country a long time. They know the language. They need to be able to work on their presentation skills to present technical material to NASA."

Overall benefits to organization? "It shows the employees we want to help them get over this hurdle. (Other?) The customers and employees see that we are trying to work with them. It's good for morale."

"Very likely" in response to likelihood of recommending program. "It's a benefit even if it's at a lower level. The coordinator was very helpful. The teachers were very adaptable. They were more than willing to do whatever needed to be done to make it a success."

Suggestions for program improvement: "With what happened with our Monday - Wednesday schedule, I would do classes on a Monday - Thursday or a Tuesday - Friday because we had a conflict with University of Maryland classes. There aren't many options. They've got to be committed and it's a heavy commitment. I was disappointed in the attendance but I understand it. (Other?)

I've thought about the idea of a lab with tape recorders; a language skills center. Have a monitor there. Open up the lab to McDonald Douglas across the street. Bendix also is nearby. At Beltsville, we opened it up to our prime."

Commendation:

Both the program coordinator and the teachers at this site are commended for their excellent working relationship with this site's contact person and for their "adaptability" in responding to the unique needs of this employee population.

Recommendation:

Subject to the approval of an FY93 grant, pursue with Ms. Coffee the potential for services delivery to a group to high-tech companies who are situated in proximity to the Loral Seabrook location. If proven feasible, a neutral site would need to be obtained, since these companies maintain strict corporate security and would not allow employees from other companies into their buildings.

The after work hours lab concept has merit in my view. A good potential location for such a site - with services delivery to several companies - would be DuVal High School. Eleanor Roosevelt High School would rate second consideration. Both are on Greenbelt Avenue within striking distance of these companies.

AMERICAN PEST MANAGEMENT, 6460 New Hampshire Ave, Takoma Park.

This is a "pest control" company which sends men in trucks to eliminate pests such as rats, mice and insects from commercial buildings and homes.

After a January 7, 1992 registration, two on-site classes began on January 14th. They operated on a 4:30-6:30 p.m. Tuesday and Thursday schedule. The classes ended on April 28, 1992 after having run for fifteen weeks.

I visited these classes on February 25, 1992.

One teacher was working with the low level group on math. The other was teaching language arts to the high level ABE group. I collected sample materials used. The work of the high level group was totally work-related. The lesson dealt with aerosols related to safety procedures and proportion, and room volume for aerosol use. The completion of a Service Report was covered. This teacher had secured all of the resource material from the work site. She uses an accident report, a work manual, and other work site materials to compile reading and English lessons.

A "Pest Control Industry" manual was used. It appears likely that these workers will, some time in the future, need to take a test to become certified to work in this industry.

Commendation:

Curriculum at this site was heavily weighted toward the technical and safety aspects of this industry. Numerous examples of these materials were included in the curriculum manual. Some of them are included in the addendum to this report. The two teachers at this site are commended for working closely with company staff in securing these materials for classroom use.

On March 26, 1992 I interviewed Mr. Wayne White, Owner/Partner of American Pest Management. At the time of this interview, the program had been operating at this site for eleven weeks.

Mr. White's responses were as follows:

"No" to noticing any changes in his employees' job performance and/or work attitudes.

Indications of improved basic skills: "I don't think we've had an opportunity to notice that. The way we would know would be to look at the written job tickets. We haven't had a chance to look carefully at them. That's how we would know."
"No" to noticing improved communication and problem-solving ability.

Selected "4" on a 1 to 5 scale rating the instruction. "I haven't been involved in the instruction. It would be from the communication I've had with the instructors and from what I've heard. (What?) I think there were a few difficulties mentioned to me by participants in the program. (What difficulties?) One was that the instruction was moving too fast for the level of some of the employees. Too much time was spent on non-program related discussions. At times the instructors failed to go over the individual homework."

"Very much" in answer to how well employees like the program. "The evidence is that they are returning time after time. Otherwise, they would have dropped out along the way."

Any problem with class scheduling? "The only problem has been that our work kept some of them from being in class at times, or it would cause them to be late for class. Otherwise, no. (Why is that?) "When the men are on a job, they have to stay until it's finished."

"Very committed" when asked about organizational support. "We provide any materials asked from us. We provide snacks and refreshments for every meeting time. We offer constant encouragement to the individual employees." (Else?) "I've sent a man out to help get a job done so the men would be able to get to class on time."

Overall reaction to classes at the work site: "Very positive. I'm very pleased that we were able to do it." Overall benefits of program to organization: "Reading and communication are essential to our business. Any increase in the reading and writing levels of our employees translates into better services to our customers." (Other?) "The Maryland Department of Agriculture has not yet made certification mandatory, but if and when it becomes mandatory, they will need to be certified to continue their employment."

Likelihood of recommending program to another employer with similar needs: "Very likely. It's an opportunity for the employees that they are not likely to have any other way."

Suggestions for program improvement: "Other than those individual things I mentioned, I can't make any other suggestions."

LAUREL RACE COURSE - INTERNATIONAL VILLAGE

As outlined in the first report, classes are conducted in the stables area for grooms and hot walkers who live at the race course, walk the horses and maintain the stables. Many are from Mexico and require ESL instruction. These classes continued during this reporting period. This program is sponsored by the Maryland Thoroughbred Horsemen's Association (MTHA). During this time, the MTHA contracted for a Spanish language class for the instructors and the native-born students.

One teacher taught an ABE class for seven native-born employees. Her curriculum binder reflected the following:

Oral communication lessons to improve coworker relations. Reading memos, letters and written requests. Reading work-based safety materials and directions, and understanding work-related vocabulary such as tools used and the parts of a horse.

Writing exercises included completing workplace forms, writing memos and reports, and completing a library card application form.

Math lessons covered computing pay information, benefits, taxes, retirement returns, race winnings and losses, measurement of horses' hooves for shoeing, and computing commission purse earnings on winning horses.

Work-related materials in the binder included a 45 item listing of the parts of a horse, and grooming equipment and tack recognition exercises. Also utilized were a Horsemen's Assistance Fund Request for Assistance form and a similar Request for Dental Assistance. A copy of a very interesting twelve page magazine article about thoroughbred grooms was used as reading material. This article featured grooms from Laurel Race Course.

CINTAS UNIFORM CLEANING COMPANY, 1769 Brightseat Road, Landover, MD.

This company sells, rents, cleans, and delivers custom uniforms and clothing, and accessories. Their workforce presently numbers 155 employees, down from a high of 210 due to layoffs. Their need was for ESL instruction at the beginning level for their Vietnamese workers who had been in this country for an average of five months. These employees were having difficulty communicating with their managers and expressing their thoughts and feelings.

Because production schedules had to be maintained, classes were conducted at the conclusion of the work day.

One class was begun on November 11, 1991. It was held on Mondays and Tuesdays from 3:30 - 5:30 p.m. for ten weeks - a total of forty hours. The class ended on January 28, 1992. Many students requested class continuance and an additional class was scheduled. Company layoffs, however, precluded its operation.

One difficulty was the use of the company cafeteria as a classroom. Initially, there was no chalkboard , workers kept coming in to use vending machines, and the teacher had to compete with seemingly constant public address system announcements.

The ESL lessons included simple discussions centered around company operations and participant duties as well as activities from daily life such as writing to a child's teacher.. Also covered were communication skills such as calling in sick and communicating with co-workers and supervisors. The curriculum also included appropriate dress, company rules, memos and the Cintas newsletter.

On the last day of class, the teacher awarded certificates and letters of commendation to most students.

On April 13, 1992, I interviewed Ms. Ann Wilcox. Her responses were as follows:

Changes noticed in job performance or not? "Because they were production workers, English probably wouldn't have made that much difference. These are jobs where they can be shown what to do."

"Yes" to noticed changes in job attitudes. "Anytime a person can communicate better with their peers and their managers and supervisors, it makes a difference. We can see a difference in their attitudes."

"Yes" to seen indications of basic skills improvement. "They are able to communicate better with their peers. They are able to mix better. They're not as shy. By nature they are a very shy people to begin with, by culture." Has this basic skill improvement resulted in improved job performance or not? "Yes. Simply because their attitude is different. (Different?) They're friendlier; they can communicate with people now. It also taught them about our culture as well."

"Yes" to noticing improved abilities to communicate on the job and to solve job-related problems. "I answered that. (Problems?) I don't know that they had any problems. Their performance was always good. They are more comfortable now."

Selected "4" on a 1-5 scale to rate instruction. "It was very good. There is always room for improvement. She worked very hard and very diligently. She enjoyed the class."

"Very Much" in answer to how well she thought the employees liked the program. "People in general are always happy to improve their skills. When you get free instruction, one should take advantage of it. I'd like to set up other classes for them. (Classes?) I'd be interested in a refresher course for our American-born population."

"No" to any class scheduling conflicts with work schedules. "Not in that respect, no. The problem now is, we have three different schedules. They are staggered by one hour each." She believes the organization to be "very committed" to this program. "I would like for us to be able to provide the classes for all the employees at one time. But with our production schedule, it's impossible."

Overall reaction to classes at the work site: "I'm in favor of it. I'm the human resource person here. The more classes I can get in here, the better. I like it. Education and health are my two top priorities."

Overall benefits of the program to the organization: "A better educated staff is a happier staff for one thing. It puts people on an equal footing. (Meaning?) The older ladies out in the plant can begin work which can lead to a GED. It builds self-esteem."

Likelihood of recommending program: "Very likely. I'm very happy with the program. It benefits the community in general, not only us here."

Suggestions to make the program better: "Most of the problems were ours. (What?) In not letting people off to participate. The staff has been very good in helping to meet our time requirements. (Attrition problems?) A little, but there we were conducting in the winter. It was dark and people had to walk to the mall to catch the bus. It was dark and also the flu season hit. A lot were dependent upon other employees for transportation."

Recommendations:

1. Contact Ms. Wilcox about initiating one or more ABE classes to run during daylight-saving time.
2. Work out a program with the company aimed at alleviating the transportation home problem for employees interested in participating, or limit enrollment to employees who appear not to be likely to miss classes because of transportation home problems.
3. Replicate Catonsville Community College's workplace learning model of providing individualized instruction to participants coming from a staggered shift schedule.

PRINCE GEORGE'S HOSPITAL CENTER, 3001 Hospital Drive, Cheverly, MD

After prior registration and testing, two classes were established on December 4, 1991. An 8:30-10:30 a.m. schedule was initiated. The two classes were later reduced to one and an evening class schedule adopted. After continuing declining enrollment, this class was closed on January 15, 1992.

Enrollees came from a variety of hospital departments. (One of them was severely learning disabled and resided in a group home.)

Work site materials used in this program included request forms, patient statistic forms, catering request forms, hospital menus, pre-op checklists, supply services requisitions, nursing data base forms, employee handbooks, medical dictionaries, and recycling information.

Learners tasks included completing job-related forms and charts, understanding safety procedures, understanding medical abbreviations and symbols, learning medical vocabulary, and practicing time management techniques.

The teachers believe that a major course accomplishment was the student selection and implementation of a course project centered around hospital-wide recycling of materials. Students researched the need, wrote letters, contacted county officials such as the Office of Recycling, analyzed costs and savings, and met with department directors and hospital officials.

On April 15, 1992, I interviewed Ms. Helen S. Segatto, Education Specialist for the hospital. Here are her responses:

"Not applicable" in response to noticing changes in participants' job performance.

To noticing changes in work attitudes: "I can't give an honest answer to that question. I'm not directly observing them daily."

"Not applicable" in response to seeing indications that basic skills had improved.

"Not applicable" in response to noticing improved abilities to communicate and solve job-related problems. "I wish it did."

Selected "5" on a 1-5 scale rating the instruction. "It was geared directly to their needs. They took a survey to assess their skills. I feel it was a five because they directly addressed them."

Perception of how well employees liked the program: "The ones that continued liked it a lot - the ones that came. The feedback I got was good. I think some of them required special education classes. (Meaning?) I really can't understand why they didn't attend."

"Yes" to problems with scheduling. "That's why we tried to move the time, but it didn't seem to help. Some of them got work release. We changed it to 4:30 to 6:30 after work. We decided to switch the time to late because some of them couldn't get off to get to class. My guess is some of them had transportation problems. Our population was especially difficult."

"Somewhat committed" in answer to organization's support. "With what I am doing now, the level of awareness for education and training needs was at a lower level than it is now."

Reaction to work site classes: "It's great. I love it. I want to try to do it again."

Respondent is "somewhat likely" to recommend this program. "If they were to take my suggestions and do it that way, I'd recommend it. We have to be sure we are spending government money in the most effective way. We've got to look at how we motivate employees to participate."

Suggestions to make the program better: "We have a very diverse population. What we need is a literacy program. They need basic math and reading skills. I have individuals I'm trying to teach common sense things. I don't think they know what they need. (Mean?)

"This program needs to find out what the roles and responsibilities are of every participant, before class gets started. Then gear the training towards those roles. Coordinate the training and do the training. That's where the transfer of learning will occur. (Gear training?)

"We have to make the information related to their lives. (Meaning?) They (meaning the education people) didn't talk to me at all about the assessment process. It was started before I got here in December. (What else)

"We had a list of interested individuals. Their attendance kept dropping off. Two teachers, then one, then agreement to cancel the program. Classes lasted six or eight weeks.

"I made the request that we find out why the attendance was dropping. It was no one's fault. Students wouldn't take responsibility for not attending. The education people didn't do anything wrong. They did everything right. (Other?)

"There's no employee accountability. Some of the employees who signed up may never have had assumed any responsibility in their lives. (Do about it?)

"I would have a registration, an orientation registration. Personalize it. I would have notebooks for every participant. I'd ask them for a ten dollar fee for materials."

Recommendation:

Despite attrition problems, Ms. Segatto seems to me to be willing to work to re-establish classes. Contact her about this potential. She has her views about how to obviate attendance problems. She wants a real voice in planning and conducting classes. A program at this site can be effective provided it is closely coordinated with Ms. Segatto through an ongoing cooperative program management model.

OVERALL PROGRAM COMMENDATIONS:

1. Subject to the approval of the FY93 Workplace Literacy Grant application, contact your representative at the U.S. Department of Education. Determine if it possible to continue to utilize some of the sites which were used for previous grants. Make the case that good contacts have already been made and that we have learned a great deal about how to solve the problems which existed in previous grants. We can be even more effective than we were if we are allowed to build on this existing base.

   The need still exists at these sites. Why go to the time and effort of locating new sites with similar needs?

2. The program administration and instructional staff are commended for instituting and following a systematic plan to capture workplace materials; the most appropriate assessment tools and strategies; instructional objectives, methodologies and teaching techniques; and best practices for this program. These materials are being collected in a systematic way to formulate a written curriculum for each worksite.

   Many aspects of these curricula will be readily transferable to future sites. (I will examine and report on these materials in my final evaluation report).

3. Each instructor completes a form which lists the workplace task, the instructional objective, and the materials used. Duplicate copies of materials used are attached to this form. These forms and materials are assembled by each instructor into a loose leaf binder. The binders are later collected by the instructional supervisor.

   Program plans include a formal compilation of this information into bound and printed curriculum guides. This will occur in April during a several day curriculum writing session.

4. Some of these binders included additional very helpful information. Some instructors went so far as to maintain a daily journal or diary of instructional activities, self-evaluations of their effectiveness, anecdotal records of the needs of their learners, and assessments of individual student progress.

   As the outside evaluator, this information provided me with great insight into what was happening on a day-to-day basis. I would highly recommend the institution of this practice for all workplace instructors.

Indeed, this practice should be brought to the attention of the NWLP staff at the U.S. Department of Education/OVAE. I had previously never heard of its use in adult learning programs of any kind but I believe it to be an exciting and innovative method of contributing to the program evaluation process. (One obvious caveat: The information they contain should remain confidential and be used in a positive way only, for staff evaluation purposes.)

5. Workplace instructors meet together with their supervisor to share their best practices. These meetings provide a forum for the instructors to share the information collected in the binders, to assess the effectiveness of the curricula, and to obtain advice and recommendations for solving any problems which may have arisen.

My third and final evaluation report will include the following:

1. An evaluation of the extent to which the goals and objectives of the proposal were attained.
2. An evaluative snapshot of the program over the life of the grant including, but not limited to, a review of the commendations and recommendations made in my first two reports.
3. A review and comments about the soon to be completed curriculum package.
4. Specific findings worthy of commendation and continuance.
5. Specific findings which suggest recommendations for program improvement in the future.
6. General findings which reflect commendable program aspects as well as those which are designed to lead to improved program quality.

ADDENDA - SAMPLES OF WORK SITE MATERIALS USED IN CLASSES

1. LITTON SYSTEMS DIVISION, AMECOM
2. CITY OF NEW CARROLLTON, DEPARTMENT OF PUBLIC WORKS
3. SOVRAN BANK OPERATIONS CENTER
4. GRACE CULINARY ARTS
5. COMPUTER SCIENCES CORPORATION/LORAL AEROSYS
6. AMERICAN PEST MANAGEMENT
7. LAUREL RACE COURSE
8. CINTAS UNIFORM CLEANING COMPANY
9. PRINCE GEORGE'S HOSPITAL CENTER

PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS/PRINCE GEORGE'S PRIVATE INDUSTRY COUNCIL FY91-92 WORKPLACE LITERACY PROGRAM THIRD AND FINAL EVALUATION REPORT

SUBMITTED BY JOHN P. CREIGHTON AS EXTERNAL EVALUATOR

INTRODUCTION

This is the third and final evaluation report of the Workplace Literacy Program conducted by the Office of Adult Education of the Prince George's County Public Schools in partnership with the Prince George's County Private Industry Council. This program was conducted under a National Workplace Literacy Program Grant of $101,080 with a nonfederal contribution of $67,610 for a total budget of $168,610. The Grant Award period was from March 1, 1991 - August 31, 1992.

I. RECAP OF PREVIOUS REPORTS

A. FIRST REPORT

This report included grant planning period site selection activities, a description of the evaluation procedures used, analyses of the results of visiting all work sites, "Employer Evaluation" questionnaire results, ninety-five "Employee Evaluation" responses, and all related findings, commendations and recommendations.

B. SECOND REPORT

This focus of this report was the workplace relatedness of the curricula. It measured relatedness against recent highly regarded research by Thomas G. Sticht. It reviewed audit/task analysis procedures, workplace materials in use in classrooms, the specificity of curricula to individual sites, companies and occupations, an analysis of curriculum binders under development, and all related findings, commendations and recommendations.

C. FINAL PROGRAM REPORT

This report was submitted to the U.S. Department of Education by the Prince George's County Public Schools and the Prince George's Private Industry Council, as cooperating workplace literacy partners.

These reports are cited to provide a context for this final report. This report will not duplicate data and other information which has previously been submitted.

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II. ATTAINMENT OF PROPOSAL GOALS AND OBJECTIVES

One objective of the program was to serve 250 or more employees. (500 employees by duplicated count, i.e., employees who attend more than one ten week class. This goal was exceeded since an unduplicated count of 368 workplace learners were served. A duplicated participation count of 501 was established by noting that 133 of the 368 learners served (36%) participated in more than one class.

The goal of service to 250 students was exceeded by 118 or 47%. **The program is commended for attaining such a substantial increase over the projected goal.**

A second objective was to provide for a total of sixty classes with a "class" being defined as a term of instruction not less than ten weeks with not less than four hours of instruction per week. For the most part, classes were conducted in these ten week cycles. A total of forty-three classes were conducted with a range from a single ten week class session at four sites, to a high of nine ten week class sessions at Laurel Race Track. Factors such as layoffs, downsizing, transportation problems, lack of incentives for employees and scheduling conflicts all inhibited the program from attaining the sixty class objective. In fairness, however, the classes which were established served the larger than anticipated number of employees enrolled.

The objective to utilize no more than 40% of commercially available materials and to develop no less than 60% workplace-specific teaching materials was attained. (See III. "CURRICULUM DEVELOPMENT below).

Students completed evaluation surveys which yielded very positive results. Workplace Employee Questionnaire results were extremely positive (see Final Evaluation Report for both survey results).

III. CURRICULUM DEVELOPMENT

An excellent Workplace Learning Guide was developed through a collaborative effort of the instructors who taught in the grant program. It consists of an abstract, a program overview, and sections relating to the ten work sites involved in the grant program.

This process was accomplished through the development of seventeen individual binders of workplace-specific curricula materials which were compiled into the Guide through a series of staff curriculum writing sessions. Copies have been provided to the U.S. Department of Education.

As stated in my previous report, the Learning Guide is excellent. Sections of it would be readily adaptable to similar occupational areas in other geographic areas of the country.

The following is my analysis of the type and quality of the curriculum development by site:

A. **American Pest Management.** This site had a strong work-related curriculum which would be good for replication by any other pest control company. Instruction included solving pest control problems, interpreting maps, reading map & street indexes, interpreting graphs, recognizing and using occupational signs, charts, forms, and written directions, using certification test questions and related information, understanding and using industry-related vocabulary including names of chemicals, and safety policies and procedures.

B. **Prince George's County Public Schools Maintenance Yard.** The participants were school building and grounds custodians. Curriculum materials included a description of the magnitude of the responsibilities of the Division of Supporting Services and the amount of materials used. An excellent section of Math problems which directly reflect work-related problems was developed. Another math section is devoted to geometry. Other section topics are automobile maintenance, measurement, mechanical concepts and spatial relationships, metric tool use, performance appraisal forms, exploded diagrams, and technical specifications. The primary emphasis of this section is working with math related problems.

C. **Cintas Corporation.** In addition to basic English language acquisition materials, skills taught included interpreting employee handbooks, on-the-job policies, production department guidelines, plant cleaning schedules, and work-related conversational skills.

D. **Grace Culinary Systems.** This curriculum includes naming of kitchen tools, utensils and appliances, cooking directions, interpreting oven temperatures, dining skills and manners, recipe measurement, following written work directions, and using occupational signs, charts, and forms.

E. **Laurel Race Course.** Curriculum includes tools used, foods for horses, tack vocabulary, library registration forms, parts (points) of a horse, and a reprint of an article about grooms and hot walkers. Also included are samples of job applications, resumes, letters of application, and an employee Request For Assistance form. No math curriculum is provided.

F. **Litton-Amecom.** A large part of the curriculum was appropriately centered around a future certification requirement requiring employees to pass a written technical test. Samples of test questions and course materials are included along with technical terms and definitions. Additionally, skills were taught in interpreting work schedules, company policies and procedures such as performance reviews and wages and benefits. Because continued company downsizing was anticipated, job change skills were appropriately taught. No specific ESOL instruction material was included. The reader cannot tell from this curriculum that participants were not native-born.

G. **Loral-Computer Sciences Corporation.** The curriculum guide reflects work with phonetics, writing - especially technical reports - problem-solving in a team setting, giving and receiving work instructions, and English grammar and usage. No math was included and was, perhaps, unnecessary.

H. **New Carrollton Department of Public Works.** This curriculum features reading local maps, truck routes, compass directions, and reading street names. Other work materials are material safety data sheets, commercial driver's license applications, CDL licensing requirements, personal banking, and measurement related to geometric shapes. No basic math skills materials are included.

I. **Prince George's Hospital Center.** One unit centered around a student selected topic of recycling materials at the hospital. Letters were written and a project was developed. Other curricular materials listed are interpreting graphs, employee handbooks and department manuals, workplace memos, reading and interpreting medical vocabulary and health care terms. No math curriculum is evident.

J. **Sovran Bank.** This guide , which was used for ESOL learners, has instructional material related to giving service, personal conduct, the bank's Personnel Policies and Procedures Manual, employee responsibilities, banking terminology, and a company fact sheet. Because layoffs were likely, lessons concerning job changing skills were included. This section does not look at all like an ESOL curriculum.

IV. PROGRAM ADMINISTRATOR INTERVIEWS AND RESULTS

Four administrator interviews were conducted to determine administrator perceptions of this program. Two interviews were conducted for each partner.

The respondent responses were written in the first person singular as each respondent's answers were given.

Mary Ellen Butlak, who was responsible for the day-to-day administration of the program, was interviewed on August 28, 1992.

A. Concerning her job title and roles and responsibilities.

I'm the Facilitator, Workplace Literacy. I find employers, set up classes, help with the recruiting of students, visit the work sites, discuss the goals with the employers, use these goals in setting up the curriculum, arrange for the placement test, the pre-test and, later, the post-test.

In some instances, I teach and am the liaison between the teacher and the school system. Also, I'm the "mentor" and, hopefully, intercept any problems. I'm responsible for some developmental meetings, particularly the curriculum one.

I oversee the compiling of the final sample curriculum binder. I tally all information for the final report from two surveys, one given at the end of class and one given sixty days after classes have ended. I'm the caretaker of all records for the year-end report.

B. How program policies were arrived at.

We tried to stick to what we said in the proposal. I was privileged to be in the last workplace program as a teacher. I implemented what I knew from the previous grant. Getting work sites, it was a lot of brainstorming about who would be interested and a lot of cold calling.

C. How the issue of securing upper management commitment was handled.

It was just basically me calling and telling them about the program, stating that we would like to run a forty hour, ten week course and that it was free and if they agreed they would commit for at least ten weeks time.

I would visit, tour the facility, talk about curricula, ask them what tasks they wanted addressed, discuss how best to recruit the employees, and then we would establish the best site for classrooms, the best class time and whether they would offer release time or some other compensation.

If they said "go", then we were committed for at least ten weeks.

D. Processes used publicize the program at work sites and recruit employee participants.

Some people had their own flyers they put in pay checks. Some had meetings where a supervisor talked to them. For some we had sign-up sheets, some went directly to the employee and said, "Sign up and try it". The race track had a big barbecue and sign-up.

E. Concerning supervisor or management awareness training.

It was more interpersonal. It wasn't a formal workshop. It was more going to them. I would meet with them personally, discuss their needs and talk about the program and take it from there.

F. Concerning the handling of on-site problems like scheduling conflicts.

We would talk about it and if there were changes, we would change it. We were lucky that we had very flexible teachers. Scheduling problems were minimal. After the first ten weeks of classes, Sovran Bank wanted to have computer classes and couldn't have them on site, so we offered them at DuVal High School in Greenbelt.

We agreed to a schedule change at P.G. Hospital Center. We were extremely flexible at the race track because the hot walkers had to feed the horses from three to four so we had that hour break in between sessions.

G. Concerning procedures used for assessment, retention, orientation and measuring learning gains.

The first thing we did was the MAPP Placement - for basic skills. Then we did a CASAS pre and post. For ESL we had some standard Maryland tests and, in some situations, pre and post-tests were designed for the site.

During the first class, we would have an orientation meeting. The teacher was there. I conducted the meeting.

The supervisors kept track of who was coming. Teachers would inquire or call the student. The employees looked out for each other. (Mean?) They'd say, "Are you coming to class?" or, "Al is still working?".

H. Concerning procedures to learn supervisor opinions of participant job performance differences.

The survey that we did sixty days after the class ended. Both the employer and the employee did the sixty day.

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There was ongoing communication between the supervisors and myself.

I. Overall rating of the instructional program from "excellent" to "poor".

I would say "excellent" for some; overall "very good". (Why?) Because we had exemplary situations. The success stories like Brown Station, Litton, American Pest, aspects of Laurel, Cintas, and Sovran Bank. Some were very work related. Some that ran many classes showed marked improvement - the men improving in their skills.

J. Concerning which partner had more authority and who was in charge of what.

PIC could have been more aggressive. (Mean?) In locating businesses. I would have liked more time to develop curriculum before classes started. (Else?) Maybe going in and discussing with management a series of ten tasks to be completed in the time allotted and, at the end of the ten week session, tell management what we were able to accomplish.

K. Would you do it all over again or not?

Sure. I would make some changes. I would recommend a full time job and benefits.

Just try to get a teacher to teach one hour a day, every day.

You have to have a bank of educators and get the cream of the crop. The workers vote with their feet. If they're not happy, they leave, especially if they're not getting work release time.

L. Other comments.

Some are really gratifying like Brown Station Road. There's a definite need for the program. There are nine criteria that, if you can meet them, the program should not fail.

I see a lot of merit if it's run well and done well. If one or two of the criteria are lacking, I can see why they fail. Over all, it was a rewarding experience.

I interviewed Ellie Rotter on August 28, 1992. As Supervisor of Adult Education, Ms. Rotter had the ultimate responsibility for this program.

A. Concerning her roles and responsibilities.

I helped write the grant. I did all the budgeting. I met very frequently with Mary and Agnes. I went to some of the sites. I really got it started with Margaret. Then we got Mary to take over. I worked with PIC trying to get employers - sites for the program.

B. How program policies were arrived at.

Once we had decided to have a program at a center, we made most of the decisions together. If there were supervisory problems or not enough people - we tried to do it as a group. I talked to Mary and PIC. The teachers and site directors also had input.

C. How the issue of securing upper management commitment was handled.

In the beginning those of us here did. Then Mary handled it. We did go out and visit the sites. They were most anxious. Many of them would work with upper level if there were problems.

D. Concerning supervisor or management awareness training.

She (Margaret or Mary) did go out. We had to meet with the union for Brown Station. We started at the top. The shop stewards publicized the program. Then Margaret went in and they brought in the employees. They had flyers, posters and bulletins. That happened at most of the sites.

E. Overall rating of the instructional program from "excellent" to "poor".

We hand-picked the people. We picked the best and trained them. We had several in-service training sessions. It's hard to say "excellent" because that includes every single person. I had very caring people. They did meet with management. They shadowed workers to find out what they were doing so that they could develop a curriculum. Teachers collected things from the site.

F. Concerning which partner had more authority and who was in charge of what.

We did. They (PIC) helped us find the sites. After that, most of it was left in our hands to develop the curriculum, find the teachers, and do the day-to-day running of the program.

G. Would you do it all over again or not?

Yes. I would make some changes. I'd try to find like sites.

Our problem was that we couldn't develop a central curriculum. I wouldn't do it with a lot of different kinds of businesses. I'd stick with one kind.

We needed more time to develop curriculum. We needed more start-up time to have an in-depth curriculum.

The biggest problem was where the employer didn't give any incentive to the employees. You've got to give some kind of incentives to make this program work. I would have sure tried to persuade them to do that - point out the benefits of the program to them.

H. Other comments.

I really think it was a great experience for the teachers and for the students. It did a lot of good. It helped a lot of people. They were able to build self-confidence and operate more efficiently and more effectively on their jobs. It's given incentive to a lot of people to go to get their GED's or to higher education.

The following interviews were conducted with Private Industry Council administrators on Dec. 3, 1992.

Joseph T. Puhalla is the President of the Council:

A. What did you understand to be the roles and responsibilities of the Private Industry Council?

Several things. First of all, our central work in workforce development. Developing sites and evaluating the program in order to understand its impact. Evaluating in order to enhance what is going on with literacy in the workplace in the county.

B. How effective do you believe your efforts have been in fulfilling these roles and responsibilities?

Somewhat effective. Personally, my involvement early on was related to getting business leadership involved.

The follow through and attention to it wasn't that intense throughout. That part left a hole that was not filled.

C. How would you describe the quality and degree of cooperation and communication between you and the adult education office?

High! Both the timeliness, quality and cooperative attitude was always evident. It was a pleasure to work in that relationship.

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D. How successful do you believe this program to have been?

Moderately to very successful. As far as the employers that were recruited, they were motivated and understood the goals of the program and the achievement of those goals. It reflects the strength of the adult education office in following through and working with the employers.

E. How likely would you be to participate as a partner in a similar program in the future?

Very likely. It's the kind of effort that's essential. It's integral to our Private Industry Council mission. (What?) What happens to at-place workers; anything that can be done to upgrade basic skills is critical to our competitiveness.

F. If you were to participate in the future, what, if anything would you do differently from this time?

I would want to play a more active role. I'd like more clearly defined duties and responsibilities. As a full partner, PIC could help the school system to carry out the program. (Else?) I'd involve our Board of Directors more in the program.

G. What, if anything, would you recommend that the school system do differently next time?

The only thing is that I'd create a team concept and make sure the team participates actively throughout the project. (Team?) PIC and the school system.

H. What other comments would you like to make about this program?

I think if organization and structure is looked at, the newly formed literacy corporation should play a pivotal role. This is so because workplace literacy efforts should be part of a comprehensive strategy to insure that all our residents are literate. It should be part of a continuum of services.

Juliette Pierce is responsible for work site development for the Private Industry Council:

A. Understanding of PIC roles and responsibilities.

To assist the school system in identifying employers who would need or be interested in workplace literacy programs.

(Else?) Once we identified an employer, to introduce the workplace literacy coordinator to her contacts on the employer side. Then, for the most part, to turn it over to the school system for them to follow through.

B. Perceived effectiveness of PIC in fulfilling roles and responsibilities.

Very effective with the ones we did identify. It depends on what the measurement standards are, but for the ones we did identify, it was successful.

C. Perceived quality and degree of cooperation and communication with adult education office.

It was good. From the adult ed. office in one case, they went over and above the norm in accommodating the employer. That went a long way. It enhanced my relationship with that employer.

D. Perception of program success.

Very successful. I would have loved to have seen the grant renewed. It takes a little while to get the program going. There are things the employer has to do first before he can say yes. If we had more start up time where you can get the word out and do the follow-up, we could have done more. (Explain) It takes an introduction to the workplace; to get the leadership to buy into it. It takes a while before they say, "We're ready, come on in".

E. Likelihood to participate as a partner in a similar program in the future.

I would, but I'd like to sit down and lay out what the outcomes would be so everyone knows the roles and goals: the numbers to shoot for.

F. What would do differently next time.

I would meet with the adult literacy coordinator and develop a strategy for what we would do together to reach the employer community. My work would be more focussed. We could create events to make the program more visible to the employer community. We could help to give it greater visibility and exposure.

(Else?) I'd bring in our job developers and summer youth developers to become informed about the program, to have brochures and to contact the employers they work with.

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G. What recommend school system do differently.

Their brochure. (What?) I'd make it more bright and attractive. I'd talk more about human resource investments and how literacy can pay off to employers. The testimonials are good. I'd appeal to the business angle. I'd want more punch behind that message.

H. Other comments.

I think it is a tremendous opportunity to improve the quality of the workforce in this county and to bring together all the resources available to the employer community. There's a real need and demand out there.

ANALYSIS OF INTERVIEWS

All four of the administrators of both of the partners were clear in their program roles as they were actually carried out. The Private Industry Council saw its role as providing help with site development only while adult education school administrators were responsible for all other aspects of the program.

Both partnerships viewed the program as essential and valuable. Both made suggestions for an enhanced partnership for similar future endeavors. Beyond that, a reading of the responses of the four administrators is sufficient and clear so that a detailed analysis would be cumulative.

V. FINDINGS WORTHY OF COMMENDATION AND CONTINUANCE

A. **Effectiveness of teaching staff.** Only the most highly qualified, experienced and effective teachers were assigned to this program. I noticed that they displayed a strong interest in and commitment to making the workplace connection in their classes.

Many of them demonstrated great flexibility in areas such as changes in class schedules, new assignments, interest in good student attendance, quality teaching, and diligence in preparing the Workplace Learning Curriculum Guide.

B. **Site selection and coordination.** The Workplace Facilitator is commended for her indefatigable efforts in assisting with the site selection process and for her work with employers in responding to emerging needs such as rescheduling, downsizing of the workforce, and the need to adapt the curriculum to specific employer requests like forthcoming worker certification requirements.

C. **Curriculum development.** While addressed elsewhere in this report, I wish to commend all involved in both the process utilized and the final product obtained through the curriculum development process. As mentioned previously, many of the Learning Guide sections are worthy of replication by other programs engaged in workplace learning.

D. **Previous commendations to note.** My first report listed commendations in the areas of employer satisfaction with the program, participant satisfaction, and employee attendance rates. These were derived from program records and numerous interviews with employers and participating workers.

My second report included numerous commendations for the following areas: literacy audit/task analysis process; the assessment process; the curricular response to identified needs; the workplace ESL programs; the "Request Form For Information To Be Used In The ABE-In-Industry Curriculum"; the use of outside resource persons; program coordinator and teachers' adaptability and working relationships with site contact persons; the securing of employment related materials such as technical and safety materials; student selection and implementation a course project; excellence of the existing base of support for continued workplace learning programs; the capturing of workplace materials; excellence of assessment and instructional methods; best practices; and daily journals and diaries kept by some teachers.

VI. FINDINGS WHICH SUGGEST RECOMMENDATIONS FOR PROGRAM IMPROVEMENT IN THE FUTURE

A. **Need for a standardized student assessment data base.** Notably lacking in the program's data collection process were MAPP/CASAS test results or other test data to measure student learning gains. Consequently, no statements can be made about this area.

The Workplace Literacy Facilitator described procedures for assessment and measuring learning gains. MAPP/CASAS tests were administered. I noted such test answer sheets during my visits. However, a problem was encountered in locating test results and test scores were not available for use in measuring learning gains. Most of the learning gains information available comes from subjective sources such as responses to questionnaire questions which elicit respondent perceptions rather than quantifiable data.

B. **Previous recommendations to note.** My first report recommended that a requirement be instituted that all instructors tour the work site prior to their teaching the first class, and that all teachers become acquainted with the on-site supervisor and informally report to that person on a regular basis.

My second report included the following: The need for a contractual agreement with each site outlining goals and objectives, and specifying company commitment and support; the need to group participants by ability levels; the need to develop an attendance reporting system; exploration of the potential for services to a group of high-tech companies including an after work hours lab concept; replication of a staggered shift workplace model of individualized instruction; and the implementation of a cooperative program management model.

I was very impressed with this program. It is too bad that continued funding was not available. No program is perfect. The recommendations I have made were in the spirit of providing an external perspective to improve what was already a very fine program conducted by dedicated and knowledgeable staff.

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